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Motivation, Language Learning Strategies, and Course Performance Among English Speaking College Students Learning a Romance Language

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MOTIVATION, LANGUAGE-LEARNING STRATEGIES, AND COURSE PERFORMANCE AMONG ENGLISH-SPEAKING COLLEGE STUDENTS LEARNING A ROMANCE LANGUAGE

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ABSTRACT

Only 8% of American college students study a foreign language (Christian, Johnson, Malone & Rifkin, 2003). Part of the reason stems from a decrease in foreign language requirements from four to two years at many secondary schools, thus reducing the number of students exposed to foreign language learning (Brecht & Rivers, 2000; Congressional Hearing Document, 2001). This creates a shortage of qualified human resources proficient in a second language at a time when an influx of immigration and globalization have created an increasing need to learn a foreign language (General Accounting Office, 2002). Meeting the human capital foreign language deficit requires substantial research to provide methods and techniques in teaching and producing a foreign language proficient U.S. workforce (General Accounting Office, 2002).

Language-learning strategy use and motivation have been found to correlate highly with language proficiency (Bremner, 1999; Gardner, Masgoret, & Tremblay, 1997). This study examined the relationship between language-learning strategies, motivation, and expected course grades of English-speaking college students learning a romance language. The entire accessible population of approximately 256 English-speaking college students learning a romance language was invited to participate in a non-experimental, quantitative, exploratory (correlational) and explanatory (comparative) study. The *Strategy Inventory for Language Learning* (SILL) developed by Oxford (1990) was used to measure frequency of student language-learning strategy use. The three subscales, *Motivational Intensity*, *Desire to Learn the Language*, and *Attitudes Toward Learning the Language*, developed by Gardner in 1985 measured students' Motivation. Cronbach's alphas were used to provide estimates of reliability for each of the six individual language-learning

strategies and for the three motivation sub-scales. Results indicated that both the *Motivation* (.94) and the *SILL* (.93) scales were reliable for measuring the motivation and frequency of language-learning strategy use of respondents. Factor analysis were conducted to test for the emergence of six factors and to establish construct validity for the *SILL* and for the *Motivation* scales. The eigen value revealed 13 factors explaining 64.6% of the total variance for the SILL and five factors for the Motivation scale which explained 40.1% of the variance. Independent *t*-tests, ANOVA with LSD and Scheffe post hoc comparisons were conducted to see if the frequency of language-learning strategies used differed significantly according to the demographic characteristics, motivation, or language-learning experiences of English-speaking college students learning a romance language. Results of the *t*-test and ANOVA demonstrated that there were significant differences in expected course grades according to gender (p = .03), age (p = .01), college grade level (p = .01), and number of languages spoken (p = *.00).* Independent *t*-tests, and ANOVAs were also conducted to test differences in language-learning strategies according to demographic characteristics and language-learning experience. Gender proposed to have the most effect on the difference in the frequency of use of almost all the language-learning strategies except for *Affective* language-learning strategies. Multiple regression analyses with the stepwise method was used to see if demographic characteristics, language-learning experiences, and motivation, were significant explanatory variables of the frequency of use of language-learning strategies used by English-speaking college students learning a romance language. Motivational Intensity (t = 6.45, p = .000, β = .44) was the strongest explanatory variable for the total *SILL* as well as for the breakdown of the subscales. The results of the regression analysis for hypothesis one was partially supported because

Attitude Towards Learning the Language, years spent studying a language, Motivational Intensity, grade level, and Affective Strategies were explanatory variables of expected course grade, with *Motivational Intensity* ($t = 3.89$, $p = .000$, $\beta = .32$) as the most important predictor. The analysis of individual language-learning strategies indicated *Metacognitive* ($t = 4.27$, $p = .000$, $\beta = .45$) *and Affective* ($t = -4.52$, $p = .000$, $\beta = -.34$) strategies as being significant predictors of expected course grade. The results of for Hypothesis two was partially supported since the other strategies were not significant predictors of expected course grade. Independent *t*-tests were conducted for hypothesis three testing to see if women had significant higher frequencies of use of language-learning strategies than do men. The results revealed that female respondents did have higher frequencies of use of language-learning strategies than their male counterparts except for *Compensation* and *Affective* strategies. Therefore, Hypothesis three was partially supported.

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CHAPTER I

INTRODUCTION TO THE STUDY

Introduction and Background

A review of the foreign language deficiency in the United States suggests the need to create viable language programs in K-12 as well as in colleges and universities. Governmental reports also provide data requesting for a stronger national language program based on sound research, which requires ample funding and guidance by a centralized office. A report by the General Accounting Office (GAO) (2002) reviewed four agencies, which reported a total of nearly 20,000 staff employees in positions that required some foreign language proficiency. These federal agencies use the foreign language proficiency grading scale, established by the Federal Interagency Language Roundtable, to rank an individual's language skills (GAO, 2002). The report revealed the difficulty in obtaining proficient individuals at a "level 3" on the foreign language proficiency grading scale (GAO, 2002). Obtaining a high level of proficiency in another language is a necessity in order to meet the foreign language staffing shortage within such agencies.

The GAO, along with other reports from the National Briefing on Language and National Security (2002), UNESCO (2003), Conference on Global Challenges, and U.S. Higher Education, Duke University (2003), emphasizes the need to develop high level language skills, especially in Less Commonly Taught Languages (LCTL) such as Arabic, Chinese, Korean, Russian, Persian-Farsi and other LCTLs. The key to reaching high levels of proficiency in LCTLs, and other languages, is to set aside time and contact hours to reach the desired level of proficiency. The reports demonstrate the number of

contact hours needed to achieve proficiency at a high "level 3" in a foreign language. In high schools, and some universities, students were offered three contact hours per week, which added up to 180 contact hours of instruction over two years (Malone, Rifkin, Christian, & Johnson, 2003). Omaggio-Hadley's (2001) textbook along with the GAO (2002) report displayed the number of contact hours needed for a student to develop "advance level" of proficiency; 720 contact hours for "advanced levels" to a minimum of 1320 contact hours for "superior level" in a language such as Russian or Arabic. Therefore, a student beginning a language program at the university level will need to input more contact hours then what is typically offered, in order to achieve an "advanced level" of proficiency in a target language. Reports and theorists conclude traditional language learning methods alone will not suffice in achieving the desired proficiency level needed to meet the human capital foreign language deficiency (Malone, Rifkin, Christian, & Johnson, 2003; Brecht & Rivers, 2000; GAO, 2002; Congressional Hearing, Doc. 2001).

Globalization and the outsourcing of jobs have caused many governmental and non-governmental agencies to shift their focus towards meeting the foreign language deficiency of the United States (Congressional Hearing Doc., 2001; GAO, 2002). Part of meeting this need is to center current and future research on the development of student language-learning methods and strategies. Such an effort will assist individuals in achieving proficiency in a foreign language (Brecht & Rivers, 2000; GAO, 2002). The globalization of the economy and the current job market not only requires more foreign language proficient people but an understanding of other cultures. Learning a foreign

language also needs to be about learning a different culture (Horowitz & Horowitz, 1992).

Many interdisciplinary researchers stress the importance of learning a second language at a young age; yet, the U.S continues to lag behind other countries when it comes to starting foreign language education at an early stage (Hakuta, 1986, Marsh, Hau & Kong, 2001; Hakuta & Cancino, 2001; Beck & Olah, 2001; Pufahl, Rhodes, Christian, 2001; McLaughlin, 1992). However, starting foreign language education at a later age does not mean that learning a foreign language, as an adult, is unattainable (Felder & Henriques, 1995; Schleppegrell, 1987). A substantial portion of the empirical, theoretical, and methodological research conducted in the field of foreign languages and applied linguistics have been on children and adolescents. Research on how adults (adults being 18 years of age and above) learn a foreign language, and the strategies they use to learn a language, have been neglected. How adults learn a language, and what strategies they employ, is highly relevant to many institutions, such as the Center for Applied Linguistics (CAL), Middlebury College, the Center for Language Studies at Yale, and other language study centers that welcome individuals to their institution who are willing to be subjects in studies related to such topics (Middlebury College website, 2004; NEALL, 2004).

Various professionals in the field of social psychology and applied linguistics have tried to apply different theoretical and hypothetical methods in the adult classroom. According to Knowles (1984) adults have always been a difficult group to analyze and tend to be overlooked, especially in the field of second language acquisition. How adults learn and acquire a language, and what hinders adults from achieving proficiency in a

foreign language, can range from lack of motivation and lack of necessity, to fear and foreign language anxiety (Knowles, 1984, Schleppegrell, 1987; Malone, Rifkin, Christian, & Johnson, 2003).

In studies conducted on how adults learn, 70% of adults were found to be self-directed learners (Lowry, 1989; Schleppegrell, 1987; Knowles, 1984). Self-directed learning is basically when the learner makes decisions, with or without assistance, about what they wish to learn, regarding a particular subject matter, how they want to go about learning the topic, and what resources and strategies they will employ to assess their progress (Cohen, 1990). Adult students tend to study a particular topic or subject based on necessity, interest, or specific purpose (Lowry, 1989). Self-directed learning, also known as self-regulated learning, is viewed by experts in the field of adult education as a model for life long learning, which can assists a learner in becoming independent and autonomous in their learning process (Mocker & Spear, 1982; Cohen 1990, Oxford & Carpenter, 1999).

Many language-learning researchers agree, increased performance in a second language occurs best when a student receives more exposure and practice in the target language (Brecht & Rivers, 2000; Brenner, 1999; Chamot & O'Malley, 1990; Malone, Rifkin, Christian, & Johnson, 2003, GAO, 2002; Omaggio-Hadley, 2001; Oxford, 1990; Oxford & Green, 1995, Oxford & Nyikos, 1989). Oxford (1990) and Chamot (1990), along with other language learning researchers, posited that successful language learners generally use many strategies appropriate to their learning. The amount of exposure to a second language with a combination of language learning strategy used is said to be an indicator of positive course performance in the second language-learning classroom

(Brecht & Rivers, 2000; Brenner, 1999; Chamot & O'Malley, 1990; Onwuegbuzie, Bailey, & Daley, 2000). Although foreign language researchers study and assess language-learning strategies, self-directed language-learning strategies are still a novelty. According to social psychologists and language experts, future efforts should focus more on the effects of self-directed strategies, (metacognitive strategies), on foreign language learning (Oxford, 1990, Chamot & O'Malley, 1990). However, Oxford cautions against focusing all research attention on just metacognitive strategies within the second language acquisition classroom (Ehrman & Oxford, 1995). Further study focused on the many dimensions in which language-learning experience, learning strategies, motivation, and expected course grade affected the second language acquisition process of university students in the United States.

Purpose

The general purpose of this exploratory (comparative), and explanatory (correlational) study was to examine the relationship among demographic characteristics, language-learning experience, motivation, language-learning strategies, and expected course grade among English-speaking college students who are learning a Romance language. The specific purposes of this study were as follows:

1. To describe the demographic characteristics, language-learning experience, motivation, language-learning strategies, and expected course grade of English-speaking college students who are learning a romance language.
2. To determine whether expected course grade differed significantly according to the demographic characteristics, language-learning

experience, motivation, and language-learning experiences of English-speaking college students who are learning a romance language.

3. To determine whether the frequency of language-learning strategies use differed significantly according to demographic characteristics, language learning experiences, and motivation of English-speaking college students who are learning a romance language

4. To explain the relationship among demographic characteristics, language learning experience, motivation, individual language learning strategy use, and expected course grade of English-speaking college students who are learning a romance language.

5. To test for the order of significance among language-learning strategies in explaining the expected course grade of English-speaking college students who are learning a romance language.

Definitions of Terms

Demographic Characteristics

Theoretical Definition

The collection of demographic data provides information about the group of people surveyed in the study (Bureau of Labor Statistics, 2007). The Bureau of Labor Statistics uses the demographic categories of gender, age, race, and ethnic origin to report statistical data, with ethnic origin referring to persons of Hispanic or non-Hispanic origin (Bureau of Labor Statistics, 2007).

Operational Definition

Demographic Characteristics (attribute variables), was measured using six dichotomous, multiple choice, and fill in the blank items comprising Part I of the *Second* Language Acquisition Survey. The six items are as follows: 1) gender (dichotomous); 2) age in years (fill in the blank); 3) college grade level (multiple choice); 4) college major (fill in the blank); 5) race (multiple choice); and 6) ethnicity (dichotomous) (see Appendix A, Part I).

Language-Learning Experience

Theoretical Definition

Chamot (1990) defined *language-learning experience* as the prior knowledge or skills a person has in a language. Krashen (1983) provided a more comprehensive definition, defining language learning experience as the prior language learning knowledge in a second or another language that is not a student's native or primary language (L1), and second language is known as (L2).

Operational Definition

Language-Learning Experience was measured in Part II of the Second Language Acquisition Survey by students filling in the blank with the number of years spent studying a language (See Appendix A, Part II).

Expected Course Grade

Theoretical Definition

Expected Course Grade was defined as a predicted value measurement given to students based on evaluated performance. (Center for Teaching Excellence, Measurements and Evaluation, 2007). U.S educational institutions use a variety of

grading systems. The decision on what grading system was used was a matter decided within the exclusive authority of the individual school or higher education institution, and may be ultimately left to the discretion of the individual faculty member or disciplinary department within the school or institution (U.S. Network for Education Information, 2007). Course grades were most often based on the criterion-reference grading system which is a fixed numeric scale usually equated to a letter mark from which the faculty assigns grades based on the student's individualized performance (USNEI, 2007). A sample grading scale might have the letters A, B, C, D, and F assigned as follows: A = excellent performance (90% to 100%); B = good performance (80% to 89%); C = fair performance (70% to 79%); D = poor performance (60% to 69%); and F = failure (below 60%) (USNEI,2007). Numeric grading scales may also range from 0 to 4, where 0 corresponds to a failing grade, and 4 corresponds to an A (USNEI, 2007).

Operational Definition

For this study, *Expected Course Grade* was measured using a one-item multiple choice question based on the 10-point grading scale used at GMU. Students selected A+ or A (4.0), A- (3.67), B+ (3.33), B (3.0), B- (2.67), C+ (2.33), C (2.0), C- (1.67), D (1.0), or F (0.0) as their expected course grade for their romance language course.

Motivation

Theoretical Definition

Motivation is defined as a driving force that initiates and directs behavior (Romando, 2007). Motivation is also defined as the forces that account for the arousal, selection, direction, and continuation of behavior (Biehler & Snowman, 1997). According to Gardner and Lambert (1972), motivation as it relates to learning a language

is comprised of the following two types of motivation: 1) Instrumental Motivation - the desire to learn a language because it would fulfill certain utilitarian goals, such as getting a job, passing an examination, etc.; and 2) Integrative Motivation - the desire to learn a language in order to communicate with people from another culture who speaks that language. The desire is also there to identify closely with the target language group.

Operational Definition

For the purpose of this study the construct of *Motivation* was measured using 30 items from three subscales derived from the two types of motivation: Instrumental and Integrative motivation(Gardner, 1985). The three subscales are as follows: 1) *Motivational Intensity*; 2) *Desire to Learn the Language;* and 3) *Attitudes Toward Learning the Language*. Two of the subscales, *Motivation Intensity*, and *Desire to Learn the Language*, use a 3-point degree of effort rating scale. The other subscale, *Attitudes Toward Learning the Language*, uses a seven-point Likert-type scale with seven response categories (see Appendix A, Part III).

Language Learning Strategies

Theoretical Definition

Language-learning strategies are thoughts or methods employed by the learner towards enhancing learning outcomes in the target language (Chamot & O'Malley, 1994; Chamot & O'Malley, 1990; Rubin 1975). The term language-learning strategy was used extensively in Oxford's research to include conscious thoughts and actions that learners used in order to achieve a particular language-learning goal; such as, memory, and guessing strategies (Oxford, 1990). According to Oxford, language-learning strategies are divided into two parts--direct strategies and indirect strategies. Direct strategies

(*memory, cognitive*, and *compensation*) are strategies students use to directly manipulate the information received for learning, retaining and recalling prior information (Chamot & O'Malley, 1990; Oxford, 1990). These strategies stem from the cognitive learning strategy concept, which consists of resourcing, grouping, note-taking, elaboration of prior knowledge, summarizing, deduction/induction, imagery, auditory representation, and making inferences (Chamot & O'Malley 1994; Oxford, 1990). Cognitive strategies tend to be linked to individual tasks. Learners, who used cognitive strategies, used many methods to manipulate information mentally through image making, elaborating, or physically grouping and taking notes (Chamot & O'Malley, 1990, 1994).

Indirect strategies are strategies that require mental and emotional awareness of what the student is doing during the cognitive process to ensure the most production or outcome, and consist of *metacognitive*, *affective*, and *social* strategies (Oxford, 1990). Indirect strategies tend to stem from the metacognitive aspect of learning and the social affective aspect of language learning among social psychologist (Oxford, 1990). *Metacognitive* strategies are linked to higher order executive skills that require the learner to reach an understanding of their own learning approaches and processes. This process also involves planning, monitoring, and evaluating the accomplishment of the learning objective. Learners who use metacognition use skills such as 1) planning-including advance organization, organizational planning, selective attention, self-management; 2) monitoring, including monitoring comprehension, and production; and 3) evaluating, which involves self-assessment (Chamot & O'Malley, 1994; Oxford, 1990; Wenden, 1999).

Operational Definition

For this study, *Language-Learning Strategies* were measured using the *Strategy Inventory for Language-Learning* (*SILL*), developed to measure the use of language learning strategies by Defense Language Institute personnel before and after language training (Oxford, 1990). The SILL consists of three sub-scales classified as direct language-learning strategies (*memory, cognitive, and compensation*) and three sub-scales classified as indirect language-learning strategies (*metacognitive, affective, and social*) (Oxford, 1990). The 50-item SILL was used to measure the strategies used by English-speaking college students who are learning a romance language (See Appendix A, Part IV).

Justification

Scholarly research in the field of socio-linguistics, education, and psychology identified the needs for further research into the second language acquisition field in relation to increasing the involvement of students in second language acquisition activities such as: traveling abroad, spending time learning the target language, students taking more necessitated initiative in their learning, and awareness of the application of language-learning strategies. Although language-learning strategies, motivation, anxiety, and other constructs were identified as having some influence on foreign language academic achievement; additional research as to how much of an effect these constructs have on second language acquisition in light of environment, gender, and other mediating variables were further investigated.

Currently, foreign language is recognized as a component to improving future national security and the foreign language human capital shortage (GAO, 2006). Foreign

language classes in both common (European languages) and less common languages (Asian and Middle Eastern languages) are deemed crucial and have increased in curriculums around the nation (NFLC, 2005). Furthermore, with a growing involvement of global and international trade, focus on learning and increasing foreign language academic achievement and proficiency is imperative to decreasing the human capital foreign language deficit (GAO, 2002, 2006). Therefore, as the deficit increases, there is a need to identify the many different aspects that affect second language acquisition and contribute to foreign language achievement.

Few empirical studies examine the relationship between language-learning strategies, gender, motivation, and expected course grades of English-speaking college students who are learning a romance language. The investigation was justified considering its significance in improving students' foreign language learning for practical use, and in the development for better foreign language training for students and teachers. Additionally, this analysis contributed to the scholarly knowledge on motivation, language-learning strategies, and second language acquisition. This study was researchable because the concepts of theoretical framework and hypotheses were measured and tested. This research was feasible because the English-speaking college student population was accessible to the researcher, and the foreign language department chair was accessible, allowing the study to be conducted in a reasonable period of time.

Delimitations and Scope

1. This study was limited to English-speaking college students who were learning a romance language as part of their studies at George Manson University in northern Virginia.

2. This explanatory/exploratory study investigated the relationships between demographic characteristics, language-learning experience, expected course grades, motivation, and language-learning strategies among English-speaking college students learning a romance language.
3. Participants whose primary language were English and were able to read and write English were considered.
4. Respondents were the target population of approximately 697 English-speaking college students who were enrolled in romance language classes.
5. Data analyzed included demographic characteristics, language-learning experience and expected course grades, motivation and language-learning strategies.

Chapter I provided an introduction to the necessity of increasing and continuing foreign language learning throughout the four years of university study, and the importance of the acquisition of a second language to the human resource capital needs of the United States. In addition, Chapter I described the purpose of the study, the variables, definitions, provided justification for the study, and listed the delimitations and scope of the study as they apply to second language acquisition.

Chapter II provides a review of the literature and theoretical framework leading to the gaps needed to be explored in the study such as the limited number of empirical studies simultaneously investigating the impact demographic characteristics, language-learning experiences, motivation, and frequency of use of language-learning strategies on second language acquisition of English speaking college students. Chapter II includes

the different models, theories, and propositions related to the factors that have been known to effect second language achievement.

CHAPTER II

REVIEW OF THE LITERATURE, THEORETICAL FRAMEWORK, RESEARCH QUESTIONS, AND HYPOTHESES

Review of the Literature

Learning Theories

Many researchers have used, to some extent, a social-psychology model of learning in conjunction with the Second Language Acquisition model. The cognitive Social Learning Theory (SLT), which stems from the Social Cognitive Theory was extensively cited and empirically tested by Bandura (Bandura & Walter, 1963; Bandura 1989). Bandura's work focused heavily on behavior and methods that stimulated behavioral change (Bandura, 1989). His theory has three guiding principles--understand and predict individual and group behavior, identification of methods where behaviors can be modified or changed, and the development of personality, behavior, and health promotion (Bandura, 1977, 1989). The aspect of self-efficacy and self-perceptions led to the understanding of self-regulation when it came to adult modification of behavior (Bandura 1989; Zimmerman 1990). The social cognitive theory by Bandura views individuals as active participants in learning rather than being completely passively regulated by external forces or stimulus from the environment (Bandura, 1986). Perceived competence has been said to have an effect on individuals' thoughts, beliefs, affective reactions, and behavior within achievement settings. Learners tend to approach tasks with confidence if they have a positive perception of themselves, and see themselves as capable (Zimmerman, 1995; Bandura, 1989). Research has also revealed that learners with high perceived competence tend to set higher goals, were more willing

to take risks, and persisted longer in the face of disappointment and difficulty (Bandura, 1989; Bandura, 1991; Knowles, 1990; Pintrich & De Groot, 1990; Zimmerman, 1990; Zimmerman & Risenberg, 1997; Zimmerman, 1995).

Second Language Acquisition

The second language acquisition classroom is unique in that it emphasizes oral and written communication, strives for authentic information and cultural interaction, builds vocabulary, and focuses on comprehension (Brecht, 2000 & Amaggio-Hadley, 2001). It is unique in comparisons to other classrooms in that the student learns and acquires information in a language other than the primary language (Amaggio-Hadley, 2001). However, in order to grasp a better understanding of second language acquisition, a definition and an understanding of how acquisition occurs is required.

There are various definitions of Second Language Acquisition. The definitions stem from many cross-disciplinary fields: applied linguistics, social psychology, educational philosophy, behavior psychology, and so on. The terminology for second language acquisition stems from the field of applied linguistics, the rationalist way of describing language learning (Amaggio-Hadley, 2001).

Acquisition of a second language requires an individual to process subconsciously the sounds and utterances of the target language (Krashen, 1985). In language acquisition, the learner concentrates on the communicative act and not on the form or correctness of the language (Krashen, 1985). According to Krashen, acquisition of a language is very similar to the way children learn their first language and constitutes a simple but natural way of language acquisition. According to Chomsky (1986) and Krashen (1985), people are born with the ability to learn their first language. The first

language learned as a child or your primary or "mother tongue," is considered Language one (L1). In Universal Grammar, children are born with an inborn code to learn L1 from birth, which is called the innate Language Acquisition Device (LAD). This device is believed to play a significant role in adult acquisition of Language two (L2) (Chomsky, 1986; Krashen, 1985). On the other hand, second language learning requires the formal instruction of language, and is comprised of a conscious process of factual knowledge about the language. Learning differs from acquisition in that the individual makes a deliberate and conscious effort, focusing on the correctness and accuracy, to speak the language; thus, at times, hindering fluency. Therefore, when one is introduced to a language at an older age, it is first learned, coupled with comprehension, and then acquired. Acquisition of a second language by adults occurs similarly to children if the adult student is not fixated on correctness of the language and accepts errors (Krashen, 2004). The acquisition of a language requires one to feel through a language and allow for trial and error. When trial and error occurs, the student may not be in conscious awareness of it but feels his/her way through the language, sensing correctness, thus birthing comprehension in the language (Krashen, 1985; Krashen, 2004).

Krashen's second language acquisition theory (1985) is comprised of five hypotheses: the Acquisition-Learning Hypothesis, the Monitor Hypothesis, the Natural Order Hypothesis, the Input Hypothesis, and the Affective Filter Hypothesis. The *Acquisition-Learning Hypothesis*, as described in the previous paragraph, makes a distinction between the conscious learning process and the subconscious learning process. According to Krashen, what is consciously learned through the teaching of grammar and rules does not become acquisition of the target language.

Krashen views second language acquisition as an informal venue, focusing on the input of messages, which can be understood in L2 and then acquired. By contrast, Ellis views language learning as an integral, important aspect of second language acquisition (Ellis, 1985). The *Monitor Hypothesis* claims that learnt material acts as a monitor device to edit output materials. According to Krashen, we acquire language through trial and error. When we attempt to transmit a message and fail, we continue through trial and error until we arrive at the correct utterance or form. The conscious learning of a language, through formal instruction, provides rule isolation, which can only be used as a monitor or an editing device, which normally occurs prior to output (Krashen, 1985, Krashen, 2004). The *Natural Order Hypothesis* states that we acquired the grammar rules and regulations of a language in a natural order (Krashen, 1985). To truly acquire a language, individuals must comprehend the message being sent or received, which is known as "comprehensible input." Comprehensible Input (CI) is seen as the central aspect of Krashen's *Input Hypothesis* (IH). Krashen believes that IH is the key to acquiring a second language because it is completely embedded in CI. Input plus the next level along the natural order equates CI (i+l) (Krashen, 1985, Krashen, 2004). Krashen views CI as the road to acquisition. Many other second language acquisition theorists agree with comprehensible input but do not completely agree with Krashen's model of Input Hypothesis, which places Learnt Knowledge towards the end or after CI. Ellis (1985) found Krashen's model posed some theoretical issues pertaining to the validity of the "acquisition-learning" distinction (p. 266).

When input or instruction is just above the level of the student, coupled with instruction rooted in a meaningful context, it invites modification, interaction and

collaboration. Input is not to be construed as intake. Input is what the teachers are contributing; intake is what the students take in from the teacher. Comprehensible input can be blocked by Affective factors--factors that deal with an individual's emotion (e.g. fear, anxiety, self-perception) (Erhman & Oxford, 1995). Lastly, Affective Filter Hypothesis is viewed as blockages for CI to occur. The learner may not be able to use CI if there is a block that prevents the full use of profiting from the comprehensible input. Yet, once the comprehensible input hits the LAD and is then processed, the knowledge of the language is acquired. The conscious aspect of the language starts to act as a monitoring device before the output occurs. Krashen sees focusing on the conscious aspect of language learning (specifically grammar accuracy) as a hindrance to the acquisition of a second language (Krashen, 2004). Krashen believes we have an innate ability to acquire language with involvement from our surroundings, thus enhancing the utterances and nuances, which develop children's language into adulthood (Krashen & Terrell, 1983). Yet, many researchers feel that acquisition doesn't occur or occurs less, in young adolescents and adult second language learners (Felder & Henriques, 1995). McLaughlin (1992) explained the difficulties adults face when trying to acquire a second language, and why children seem to learn a second language more easily than older learners (McLaughlin, 1992). First, adolescent and adult second language learners are not placed in situations where they are forced to speak the target second languages, unless they are in the target language country. Second, the requirements to communicate for children are different than those of adults. Adult and adolescent language-learners have difficult words to communicate and a richer, more developed language vocabulary than do children. According to McLaughlin (1992), once these issues are addressed it is

possible for an adult to acquire a second language, and to achieve competence and fluency in a second language.

Motivation and Language Acquisition

A number of factors have been shown to influence performance in the second or foreign language classroom. Motivation is an important variable in second language learning achievement. Gardner (1985) found motivational components such as attitudes towards learning the language, desire to learn the language and motivational intensity, had a positive influence on performance in the language-learning classroom. Researchers have confirmed motivation as an influence on performance in the second or foreign language-learning classroom, with attitude as a situational support (Gardner, 1985; Gardner, Masgoret & Tremblay, 1997).

Motivation, according to Gardner and Lambert (1972), relates to learning a language which is comprised of the following two types of motivation: 1) *Instrumental Motivation* - the desire to learn a language because it would fulfill certain practical goals, such as getting a job, passing an examination, etc.; and 2) *Integrative Motivation* - the desire to learn a language in order to communicate with people from another culture that speak that language. The desire is also there to identify closely with the target language group. The motivational construct, which is derived from the two types of motivation, are motivational intensity, the desire to learn a language and the attitude one has towards learning the language (Gardner, 1985).

Gardener's motivational propositions, which is comprised of intergrativeness, attitude towards learning the language, and desire to learn the language, instrumental orientation, refers to an interest in language learning for pragmatic reasons, and language

anxiety, referring to the anxiety reaction of the individual when called upon to use the target language (Gardner, 1985). These propositions have been shown to have an effect on second language learning (Gardner, 1985). These constructs were shown to have an affect on second or foreign language achievement (Gardner, Masgoret & Tremblay, 1997; Hashimoto, 2002). The socio-educational second language acquisition model was a catalyst for the development of the Attitude Motivation Test Battery (AMTB), which was created to assess various individual variable differences within the second or foreign language-learning classroom (Gardner, 1985; Gardner, Masgoret & Tremblay, 1997; Hashimoto, 2002).

The model described by Gardner was seen as a good start to understanding motivation within the second language acquisition classroom (Dornyei, 2005; Hashimoto, 2002; MacIntyre, MacMaster & Baker, 2001). Although Gardner's proposition have been used, cited and extensively supported, it has practically gone unchallenged until the 1990s (Dornyei, 2005). In addition, the many facets of motivation within a second language acquisition classroom was suggested to be very robust to be limited to just intergrativeness and instrumentation (Dornyei, 2005; Rueda & Chen, 2005). Researchers find that Gardner's model excludes some variables, and that limited concepts of cognition, and self-efficacy are mentioned (Dornyei, 2005; MacIntyre, MacMaster & Baker, 2001; Pintrich & De Groot, 1990).

One study to test Gardner's propositions was conducted by Gardner et al. (1997), who conducted an exploratory/explanatory study about the predictive validities of different measures to determine the underlying dimensions of the relationships among constructs used such as language attitude, motivation, anxiety, self-confidence, language

aptitude, learning strategies, field independence, and measures of achievement in the target language. Although many of the relationships between some of these constructs had been investigated, there had not been a study that considered all of these constructs together (Gardner et al., 1997). The literature review consisted primarily of empirical studies testing the relationship between each of the above-mentioned constructs and their effect on language-learning achievement (Gardner et al., 1997). The review compared and contrasted theories about motivation, anxiety, self-confidence, language aptitude, learning strategies, field independence, and their effect on second language achievement (Gardner, Tremblay, & Masgoret, 1997). Gardner et al. (1997) identified a shortage of empirical studies concerning the relationships between the constructs and L2 achievement in terms of a causal model and the predictive validity of those constructs on second language academic achievement (Gardner et al., 1997).

A random sample of 102 (82 females and 20 males) university students enrolled in introductory French was studied. Participants were tested in two stages; the first stage was a questionnaire containing the constructs of attitudes, motivation, achievement and self-rating scales of French Proficiency, and the second stage was a short language history questionnaire (Gardner et al., 1997). Data collection procedures were clearly described. There was no indication of whether or not the study was IRB approved.

Reported Cronbach's alphas for the three subscales that make up the *Motivation* construct were .86 for *Attitudes towards Learning French*, .78 for *Desire to Learn French*, and .76 for *Motivational Intensity* (Gardner et al., 1997). To investigate the factor structure of the instrumentation, Gardner et al. (1997) conducted exploratory factor analysis, and specified an eight-factor varimax factor analytic solution. Eigenvalues were

required to be more than 1.0. Regardless of the different theoretical models, they grouped together into five independent clusters. These five factors were identified as: Self-confidence with French, Language Learning Strategies, Motivation to Learn French, Language Aptitude, and Orientation to Learn French (Gardner et al., 1997). Results indicated that some of the variables were more highly related than others to indices of achievement based on measures of specific skills taken more or less at the time when these other variables were assessed. Furthermore, most measures demonstrated comparable correlations when criterion was a more global measure, such as French grades, that reflects competence in a number of characteristics over a long period of time. Nevertheless, most of the variables in this study (except for the measures of Learning Strategies and Field Independence, and to some extent Language Attitudes) were found to be significantly related to measures of L2 proficiency (Gardner et al., 1997).

These results led Gardner at al. (1997) to conclude the following: 1) there are some functional relationships among the measures, and that even these categories are not mutually exclusive; 2) when achievement is assessed by relatively objective measures taken at the same time as the other measures, indices of language anxiety, self-confidence, and can-do evidence much higher correlations with achievement than do indices of *Language Aptitude, Motivation, or Language Attitude* (Gardner et al., 1997).; and 3) results provided strong support for the causal model, suggesting that the model permitted a way to understand how variables interrelated and complemented one another (Gardner et al., 1997). The authors suggested that further research might benefit from investigating the possible confounds of all the variables, with self examination of French

proficiency, as well as feelings of anxiety, which might further assist language educators in developing new ways to improve L2 achievement (Gardner et al., 1997).

Language-Learning Strategies and Second Language Acquisition

Defining and Measuring Language-Learning Strategies

According to O'Malley and Chamot (1990), much of the prior research in second language acquisition focused on the teacher creating information that would enhance comprehensible input. Very little research actually focused on the process of the learner intake or what goes on with the learner. The focal point was placed on how information is stored and retrieved for future use but not on the enhancement of learning (Oxford, 1990; Chamot & O'Malley, 1990).

To arrive at a definition for learning strategies, Chamot and O'Malley (1990), thought to identify the process by which strategies were stored and retrieved. Thus, the definition used for learning strategies stemmed from Anderson's (1980) cognitive theory, which focuses on how information is stored and retrieved (Chamot & O'Malley, 1990; Oxford, 1990). The cognitive model of learning indicates that learning is active and presents learners as active participants in the learning process. In the cognitive model learners select information from their environment, organize it, relate it to prior knowledge, retain what is important, and retrieve it when necessary (Anderson, 1980; Chamot & O'Malley 1994). According to many experts in the field of language acquisition, active learners are better learners than those who do not actively participate in their own learning processes (Chamot & O'Malley 1994; Onwuegbuzie Bailey, & Daley, 2000; Krashen 1985).

Metacognitive strategies have been seen as the most important and extensively studied of all the strategies due to the need for students to gain some control of their second language acquisition process (Oxford, 1990; Wenden, 1999). Metacognition has been used by many in the field of second language acquisition to refer to knowledge about cognition or the regulation of cognition (Chamot & O'Malley, 1990). Metacognition is very much needed in order for students to understand what their cognitive processes are and to guide their learning processes (Oxford, 1990, Chamot & O'Malley, 1990, Zimmerman & Risenberg, 1997). A branch of metacognitive strategy, which social psychologists and educational researchers call self-regulated or self-directed learning, involves goal setting, regulation of efforts to reach a goal, self-monitoring, time management, and physical and social environment regulation (Zimmerman & Risenberg, 1997).

Since students need to learn to manage the knowledge they receive, it has been noted that students should become more aware of their cognitive learning processes and strategies in order to use and apply metacognitive strategies. Metacognitive strategies aid in providing the learner with self-guidance towards the learning processes, which requires manipulation of the cognitive aspect of learning. Cognitive strategies operate directly on incoming information, manipulating it to further enhance learning (Zimmerman & Risenberg, 1997; Chamot & O'Malley, 1994). Thus, teaching strategies within the academic foreign language classroom, or any content, supports the learner in gaining an important perspective on learning, seeing the relationship between the strategies used and his/her own learning effectiveness, and planning and reflecting on learning, to gain greater directedness or autonomy as a learner.

Language-learning strategies are techniques or steps taken by the student to improve their own learning (Flavell, 1970; Oxford, 1990; Rubin 1975). The term language-learning strategies is used extensively in Oxford's research study to involve naturalistic practice that facilitate the acquisition of language skills, noting guessing and memory strategies are equally useful to both learning and acquisition (Chamot & O'Malley, 1990; Oxford, 1990). Therefore, Oxford describes language-learning strategies as the operations used by learners to aid the acquisition, storage and retrieval of information (Oxford, 1990; Oxford & Nyikos, 1989). Many researchers sought to classify the language-learning strategies in general, but Oxford (1990) created the most comprehensive classification assessment of strategies called the *Strategy Inventory for Language Learners* (SILL), which contains six types of strategies, classified into two sub-groups of direct and indirect. The three sub-scales classified as direct language-learning strategies are *Memory, Cognitive*, and *Compensation*, and the three sub-scales classified, as indirect language-learning strategies are *Metacognitive*, *Affective*, and *Social* strategies.

Oxford's development of the *Strategy Inventory for Language Learning* (SILL) was originally developed to assist with the improvement of foreign language learning for the department of defense and other governmental institution. The original development of the *SILL* consisted of 121 strategies. The strategies were revised and the current of 80 and 50 items, version 7.0, is the most comprehensive and widely used language-learning strategy inventory to date (Oxford, 1990; Oxford & Nyikos, 1989). Oxford's language-learning strategy theory is embedded in the *SILL*. The two main parts of the *SILL* consist of direct and indirect strategies. The direct strategies are strategies that deal directly with

learning mental processes such as *Memory, Cognitive* and *Compensatory* strategies. The first mental process of *Memory* is a strategy used to assist the learner in retrieving and storing information for later use (Oxford, 1990). This strategy works along with the *Cognitive* strategies, which are skills that involve manipulation or transformation of the language in some direct way, such as the following: note taking, functional practice in natural setting, reasoning, analysis, formal practice with structures and sounds (Oxford, 1990). *Cognitive* strategies tend to be linked to individual tasks. Learners, who use *Cognitive* strategies, use many methods to manipulate information mentally through image making, elaborating, or physically grouping and taking notes (Chamot & O'Malley, 1990; Oxford, 1990). *Compensation* strategies are behaviors used to compensate for missing knowledge of some kind--inferencing while listening or reading, or using synonyms or circumlocution while speaking or writing. The next three strategies are described as indirect strategies, which are *Metacognitive, Affective*, and *Social* strategies. These indirect strategies are behaviors and techniques used to assist the learner with acquiring the second language. *Metacognitive* Strategies are seen as higher order executive skills that involve planning, monitoring and evaluating the accomplishment of the learning objective. *Metacognitive* strategies are also seen as actions used for centering, arranging, planning, and evaluating one's learning (Chamot & O'Malley, 1994; Oxford, 1990). According to Chamot and O'Malley (1994) and others, such as Oxford (1990) and Wenden (1999), models can be created for assessing strategies that request metacognition. This strategy is important if learners desire to gain executive control over the learning process and understand their own learning approaches (Oxford, 19990; Wenden, 1999). *Affective* strategies are techniques that help learners gain better

control over their emotions, attitudes, and motivations related to language learning (Oxford, 1990; Chamot & O'Malley, 1990). *Social* Strategies are behavior exhibited by the learner involving other people in the language-learning process, such as questioning, cooperating with peers, and developing empathy (Oxford, 1990). These two strategies are significant in second language acquisition, as presented in Krashen's model "The Affective Filter," due to its focus on cooperative interaction and control over affects (Krashen, 1982). These strategies are further described, categorized and classified together in the CALLA handbook by Chamot and O'Malley (1994). The *Affective* and *Social* strategies are not as developed as the other categories in the context of foreign language acquisition due to the nature of individual emotions and attitude towards the topic. This normally falls under the research of social psychologists that look at the affective factors as a possible predictor or hindrance of foreign language achievement (Chamot & O'Malley, 1990; Krashen, 1985; Oxford, 1990; Onwuegbuzie et. al. 2000).

The Influence of Gender and Language Proficiency on Language-Learning Strategy Use and Second Language Acquisition

A number of studies have investigated differences in language-learning strategy use based on gender and language proficiency (El-Dib, 2004; Khalil, 2005; Tercanlioglu, 2004; Shmais, 2003). Some studies have shown a significant relationship between language-learning strategies and language-learning proficiency (El-Dib, 2004; Shmais, 2003; Khalil, 2005). Studies have also shown significant differences in overall strategy use between genders (El-Dib, 2004; Khalil, 2005; Tercanlioglu, 2004; Shmais, 2003). One study found women exhibited greater frequency of overall strategy use than did men (Khalil, 2005), while another found men exhibited greater frequency of overall strategy

use than did women (Tercanlioglu, 2004). The other studies found inconsistencies or no significant differences between genders (El-Dib, 2004; Shmais, 2003). These studies all used the *Strategy Inventory for Language Learning* SILL in many different settings. A critical analysis of each of these studies is presented in the following section.

Tercanlioglu (2004) conducted an exploratory study, which aimed to discover gender differences in language learning strategies used by foreign language-learners at a Turkish University. The participants in the study were third year (undergraduate) students enrolled in a teacher education program intending to teach English in a secondary school (Tercanlioglu, 2004). Tercanlioglu's literature review consisted primarily of early theoretical literature, and empirical studies testing the relationship between gender, greater strategy use, and level of proficiency. Although the review lacked current empirical studies, it did compare and contrast some theories regarding gender and language learner strategy use (Tercanlioglu, 2004). Empirical studies about the relationship between language-learning strategy use and gender were examined. Conflicting results lead Tercanlioglu to further examine previous propositions about females using more communication strategies than males (Oxford & Nyikos, 1989; Oxford, 1994; Oxford & Green, 1995).

The final data-producing sample consisted of 184 (144 females and 44 males), students; the initial sample size was not identified. A Turkish translation of Oxford's (1990) *Strategy Inventory for Language Learners* (SILL) version 7.0 for ESL/EFL was used to measure the use of the following six strategies: 1) memory; 2) cognitive; 3) compensatory; 4) metacognitive; 5) affective; and 6) social by gender (Tercanlioglu, 2004). The reported Cronbach's alpha reliability coefficients ranged from .89 to .98 in

various studies reviewed by Tercanlioglu (2004). The author noted that the validity of the instrument rests on its predictive and correlative link with language performance and its relationship to sensory preferences (Tercanlioglu, 2004). In Tercanlioglu's study, Cronbach's alphas ranged from .72 to .86. The correlation coefficient between most scales of the SILL was statistically significant at the 0.01 and 0.05 alpha level on a two-tailed *t*-test. However, memory strategies did not correlate with affective strategies.

Reported means were memory (3.22), cognitive (3.23), compensatory (3.37), metacognitive (3.39), affective (2.88), and social (3.14). Although male students reported higher frequency use of strategies in five of the six scales than did female students, this gender difference was only statistically significant for cognitive ($p < .001$) and metacognitive strategies ($p < .05$). Data collection procedures were clearly described. There was no indication of whether or not the study was IRB approved.

Findings were presented in terms of strategy use by gender under three categories--overall strategy, use of each of the six strategies, and use of individual strategy items (Tercanlioglu, 2004). The reported mean score for the SILL scores reported ranged from 1.40 to 3.59 (Tercanlioglu, 2004). ANOVA results indicated a statistically significant effect for the gender related differences between and within groups on the "using all your mental processes": *F-value* = 4.29, for gender differences in students "Organizing and evaluating your learning" was also statistically significant at $p < 0.01$ and $df = 1, 182$ (Tercanlioglu, 2004). These results supported findings in past studies that language-learning experience motivates learners to use more strategies that require planning and evaluating learning (*metacognitive* strategies) (Chamot & O'Malley, 1990; Khalil, 2005; Oxford, 1990; Oxford & Green; Wenden, 1999). The results also showed gender

differences favoring males rather than females, which did not support prior studies where females were reported to have higher frequency of strategy use than male students (Khalil, 2005; Oxford & Nyikos, 1989; Oxford, 1990; Oxford & Erhman, 1995; Oxford & Green, 1995). Tercanlioglu attributed the results to the male-dominated Turkish society, and the possible effect of lower self-esteem among female students on reported strategy use (Tercanlioglu, 2004).

Limitations reported by Tercanlioglu included the small sample size, which limited generalisability of the results. Another reported limitation was the study's exploratory design, based on the limitations, the following recommendations for future study were provided: 1) the study of gender and language strategy use should also include the cultural background and educational setting of second language-learners; 2) cross-validate findings from the present study to a different and larger sample; 3) investigating why some learners have lower strategy use for the purpose of increasing strategy use; and 4) in addition to gender, differences in strategy use should also be examined by age.

Khalil (2005) conducted an exploratory (comparative) study about the effect of language proficiency level and gender on language-learning strategy use among Palestinian high school and university students learning English as a foreign language. Khalil's literature review was fairly current, but consisted primarily of empirical studies testing the relationship between gender, greater strategy use, and higher level of proficiency. The review did not compare and contrast theories about gender and language-learner strategy. However, empirical studies about the relationship between language proficiency level and strategy use and gender were examined, and conflicting

results lead Khalil to further examine Oxford's (1990) proposition of females using more communication strategies than male.

A purposive sampling plan resulted in the final data producing sample of 378 (194 females and 184 males), and a response rate of 100%. An Arabic translation of Oxford's (1990) *Strategy Inventory for Language Learners* (SILL) version 7.0 for ESL/EFL was used to measure strategy use of the following six categories of strategies: 1) cognitive; 2) compensatory; 3) metacognitive; 4) affective; and 5) social by language proficiency level (school and university) by gender (Khalil, 2005). The reported Cronbach's alpha for the internal consistency of the total SILL was .86. No evidence of validity was reported. Data collection procedures were clearly described. There was no indication of whether or not the study was IRB approved.

Findings were presented in terms of variation in strategy use by proficiency level (high school or university) and gender under three categories--overall strategy, use of each of the six strategies, and use of individual strategy items (Khalil, 2005). Mean SILL scores reported were 3.21 and 2.99, for university students and high school students, respectively. ANOVA results indicated a statistically significant effect for proficiency level F (1, 347) 22.9, $p < 0.05$ and for gender F (1, 347)= 11.47, $p < 0.05$. These results supported findings in past studies that language-learning experience motivates learners to use more strategies that require planning and evaluating learning (metacognitive strategies) (Chamot & O'Malley, 1990; Khalil, 2005; Oxford, 1990; Oxford & Green; Wenden, 1999). Reported SILL means for females and males were 3.18 and 3.02, respectively. These findings also supported prior studies where females were reported to have higher frequency of strategy use than male students (Oxford & Nyikos, 1989;

Oxford, 1990; Oxford & Erhman, 1995; Oxford & Green, 1995). The ANOVA did not yield a significant interaction between proficiency level and gender, which was also consistent with findings from other SILL studies (Nyikos & Oxford, 1989; Oxford, 1990; Oxford & Green, 1995, Lan & Oxford, 2003; Khalil, 2005). ANOVA results also yielded significant variation in the use of five of the six categories of strategies by proficiency level--whereby university students reported significantly higher frequency of use than high school students (Khalil, 2005). There was no significant difference between the high school and university students for affective learning-strategies. This further demonstrated that duration of language study positively affects learner's use of strategies (Khalil, 2005).

These findings led Khalil to compose conclusions on the exploration of other individual socio-psychological variables on strategy use, such as attitudes, motivation, personality type, learning style, L2 setting, and first language (L1) experiences, effect strategy use. Khalil concluded a need existed for students to have the opportunity to practice a wide variety of strategies appropriate to the different instructional tasks and activities that are part of the L2 learning classroom experience (Khalil, 2005). Furthermore, training strategy assessment and instruction should be implemented in teacher preparation and training programs. Khalil reported the following recommendations for future study and practical applications of future research: 1) teacher curriculum development; 2) guided planning of strategy assessment and training activities for English as a Foreign Language teachers, based on learner strategy need; 3) further investigation of the affects of attitudes, motivation, L2 learning environment, and experiences in L1 development on strategy use; and 4) the inclusion of self-reported data,

interviews, think-aloud protocols, diaries, and dialog journals in the data collection process (Khalil, 2005).

Shmais (2003) also conducted an exploratory study about language-learning strategy use among Arabic-speaking Palestinian university students learning English, according to gender and language proficiency; however, Shmais examined both individual and total strategy use. Shmais's literature review lack current empirical studies, and consisted primarily of empirical studies testing differences in strategy use by gender and higher levels of language proficiency, as well as the effect of self-efficacy on strategy use (Chamot & O'Malley, 1990; Nykios & Oxford, 1989; Oxford, 1990; Oxford & Green, 1995). Shmais mentions the theories and propositions concerning successful language learners using many language-learning strategies (LLS) (Chamot & O'Malley, 1990; Oxford, 1990; Rubin, 1975). Theories about gender and language-learner strategy use were not thoroughly compared and contrasted in this study. However, empirical studies about the relationship between language proficiency level and strategy use and gender were examined and some conflicting results led the author to further examine the proposition that females used more strategies than males (Shmais, 2003).

Shmais used a purposive sample of 120 (19 male and 80 female). The proficiency variables reflected by students were their learning levels (sophomore, juniors, seniors), self-reported proficiency in English (university average in English), and language self-efficacy (how good the students perceived themselves as English learners) (Shmais, 2003). All of the subjects had studied English for eight years.

Oxford's (1990) *Strategy Inventory for Language Learners* (SILL) version 7.0 for ESL/EFL was used to measure strategy use of the six categories of strategies--

cognitive, compensatory, metacognitive, affective and social strategies. However, in this study Shmais consulted English teachers at the English Department at An-Najah National University on strategies used by their students, as well as her experience in foreign language teaching. She then identified strategies that students were familiar with and could relate to and as a result the researcher generated a list of strategies and added them to the 50 items of the SILL. The list contained ten items added to the questionnaire as "Other," to indicate the added items were not part of the SILL (Shmais, 2003). Thus the final version of the questionnaire consisted of an Arabic translated version of the SILL and the "Other" ten items totaling, 60 items (Shmais, 2003). Reliability estimates were .83 for the internal consistency of the instrument; validity was not established. Data collection procedures were clearly described, but there was not a report of whether or not the study was IRB approved.

In answer to the first research question, items related to metacognitive strategies were found to have the highest means, which was consistent with findings from other *SILL* studies where metacognitive strategies were found to be the most frequently used of the six strategies (Nyikos & Oxford, 1989; Oxford, 1990; Oxford & Green, 1995, Khalil, 2005). To answer the second research question, about strategy use and gender, a *t*-test was used to test for differences in strategy use based on gender, but none was found at the $p < .05$ level. The third research question tested for differences according to proficiency (university average, level of learning, and self-efficacy). A *t*-test found no significant differences based on university average (those above 80% versus those below 80%) for the total *SILL* score (combined strategies). However, some significant differences were found based on individual strategy use. Results indicated less proficient students used

Affective (t = -2.33, p < .05) and *Others* (t = -1.99, p < .05) strategies more frequently in order to lower their anxiety and encourage themselves to store and retrieve information. ANOVA was also used to test difference in language-learning strategy according to university level, language proficiency level, and gender. No main effects were found for university level or gender (p <.05 levels). For level of learning, a one-way ANOVA was conducted. While no significant differences were found for *Compensation*, *Metacognitive*, or *Affective* strategies, significant differences were found for Memory, *Cognitive* and *Social*, and "*Others*" strategies. Further, a Scheffe's post hoc was conducted to show comparisons between means of *Memory*, *Cognitive, Social*, and "*Other*" strategies. There were significant differences between means of *Memory* and "*Other*" strategies according to learning level in favor of the sophomores. This indicated that sophomores used more *Memory* and "*Other*" strategies (Shmais, 2003). The results also indicated significant differences in means of *Cognitive* strategies in favor of the juniors, and differences in *Social* strategies in favor of the sophomores and juniors (Shmais, 2003).

According to Shmais (2003), the effects of gender and proficiency on strategy use appear to be inconsistent with other studies, since the Shmais study indicated no significant differences at (p=0.05) for the two variables, while others had found significant differences (Oxford, 1990; Oxford & Green, 1995, Khalil, 2005). Shmais attributed this inconsistency to the fact that prior studies conducted studies on high school students while this study consisted of English majors at a university should have been more aware of the processes and strategies they employed to achieve a goal (Shmais, 2003). Although there were no significant differences detected, it should be noted that

more than 70% of the sample were females and only 19 out of the 99 students were males. Further, the researcher noted that the use of some individual strategies could be attributed to culture and the educational system in Palestine, where students have limited opportunity to practice using certain strategies, especially in large classes (Shmais, 2003). Other results showed that there were positive relationships between strategy use and language proficiency as reflected by university average, learning level, and self-efficacy. The author also noted that students with high proficiency levels (those whose averages were more that 80%, the juniors, and those whose self-efficacy was very good) used more *Cognitive* strategies than less proficient students (those whose averages were less than 80%, the sophomores, and those whose self-efficacy was poor). These results indicate that students who reported to be more proficient were more aware of their strategies, and searched for more opportunities to practice the language. The use of more *Cognitive* strategies by proficient students can be attributed to these students' need to process and revise internal models in order to receive and produce the language (Shmais, 2003).

The findings led Shmais to conclude and recommend that there is a need for more comprehensive research on a wide range of variables affecting language-learning strategies used by Arab learners, such as cultural background, beliefs, learning style, motivation, attitude, etc. Furthermore, research on the frequency of use of the *Social, Affective strategies,* and choice of given strategies were also recommended since it would be helpful to both the learners and teachers. Finally, Shmais (2003) recommended further research on strategy instruction in order to build on the theory for future foreign language teaching practice for the purpose of assessing learners' strategies.

El-Dib (2004) conducted exploratory research about the link between culture, gender, language level, and learner's choice of language-learning strategies. The study sought to identify differences in strategy use according to culture, gender, and language level among students who studied English for Special Purposes (ESP) in Kuwait. El-Dib described Kuwait as a hybrid context society--defined by Oxford and Green (1995) as a context that neither fits the description of a second language setting nor that of a foreign language environment. El-Dib's literature review was fairly current, but consisted primarily of empirical studies testing the relationship between gender, greater strategy use, and the underlying factors of the *SILL* that could allow for further cross-culture comparisons. The review did compare and contrast theories about gender and language-learner strategy. However, empirical studies about the relationship between language-learning strategy use and gender were examined, and conflicting results led El-Dib to further investigate the proposition discussed in Oxford and Green (1995). El-Dib also reviewed literature by Oxford and Burry-Stock (1995) which compared six sets of data from Puerto Rico, Taiwan, China, Japan, Egypt, and the United States. The purpose of that study was to support the *SILL* as a valid and reliable research tool, and to relate using certain learning strategies to certain cultures (Oxford & Burry-Stock, 1995). It was noted by Oxford (1995) that a factor entitled "active naturalistic language use" explained the most variance in Puerto Rico (a hybrid context), China, Japan, and the United States (El-Dib, 2004). Thus, El-Dib attempted to provide another set of data to identify those factors present in Kuwait and to determine whether they are in contrast or similar to those found in Puerto Rico, China, Japan, and the United States (El-Dib, 2004).

A random sample of 750 students was drawn from a large student population enrolled in the four colleges of the second leading educational institution in Kuwait--the Public Authority of Applied Education and Training (PAAET). The four colleges were the following; 1) the College of Business Studies; 2) the College of Basic Education; 3) the College of Technological Studies; and 4) the College of Health Sciences (El-Dib, 2004). The final data-producing sample was 504 students (260 females and 244 males), for a response rate of 67.2%. An Arabic translation of Oxford's (1990) *Strategy Inventory for Language Learners* (SILL) version 7.0 for ESL/EFL was used to measure strategy use of the following six categories of language-learning strategies: 1) *Cognitive*; 2) *Memory*; 3) *Compensatory*; 4) *Metacognitive*; 5) *Affective*; and 6) *Social* by language proficiency level (college), by gender, and culture. El-Dib (2004) mentioned the wide use and establishment of the *SILL* yet did not report on the Cronbach's alpha for the internal consistency of the *SILL*. No evidence of validity was reported. Data collection procedures were clearly described. There was no indication of whether or not the study was IRB approved.

El-Dib (2004) conducted factor analysis and specified an eight-factor Varimax factor analytic solution. Eigenvalues were required to be more than 1.0. To be included as part of a factor, the loading of any individual item had to be more than .30. Additionally, a *t*-test was used to test for differences in strategy use according to gender, language proficiency, and culture; $p < .05$ was used to determine significance (El-Dib, 2004). Factor analysis resulted in eight rather than the nine that had been previously reported by a prior study conducted by El-Dib. The identified factors explained 42.10% of the variability among the 50 items on the SILL (El-Dib, 2004). Findings from the

factor analysis were consistent with previous findings in other studies investigating strategies in foreign language context (China, Japan, and combined United States and the hybrid contexts Puerto Rico) (El-Dib, 2004, Oxford, 1995). Active naturalistic language use was the number one factor explaining the most variability in the SILL (El-Dib, 2004). The findings in this study supported the assumption that social context is probably the strongest variable influencing language learners to use certain strategies more than others (El-Dib, 2004). Factors related to gender differences remained the most inconsistent and illusive (El-Dib, 2004; Tercanlioglu, 2004). In a previous study conducted by El-Dib no significant differences between males and females were displayed among the six categories of the SILL. However, in El-Dib (2004) *t*-test analysis resulted in scores ranging from -.435 to 2.107, with mean scores of 2.04 to 4.04, and males using factor one (active naturalistic language) significantly more than females. Females were found to use factor three (cognitive-compensatory) and factor five (repetition-revision strategies) significantly more than males (El-Dib, 2004). Results also indicated a tendency among the least proficient students to use affective strategies in order to help them deal with tension related to learning a foreign language. This finding raises the issue of anxiety and its relationship to language acquisition (El-Dib, 2004). This finding lead El-Dib to suggest that further research be conducted establishing the possible relationship between strategy use a host of psychological variables (El-Dib, 2004).

These findings led to El-Dib to conclude that the discrepancy between the results of females and male strategy result from the opportunities given to each gender and their cultural context (El-Dib, 2004). This conclusion led El-Dib (2004) to the following recommendations for future research: 1) the future direction of strategy research should

be moving toward relating strategy use to the task and demands of learning contexts within a cultural setting; 2) along with a questionnaire assessment format, think-aloud protocols and retrospective verbal reports may be the most appropriate techniques for strategy assessment; and 3) future studies should investigate the uniqueness of certain language learning tasks and contexts, and how these may dictate or facilitate using certain strategies while blocking others (El-Dib, 2004).

Synopsis of the Literature

Second language acquisition researchers and many professionals in the field of psychology, linguistics, and education seek to understand the factors influencing course performance and language proficiency within the second language-learning classroom (Arroyo, et al., 2005; Bandura, 1989; Chamot & O'Malley, 1990: El-Dib, 2005; Gardner, 1985; Gardner et al., 1997; Khalil, 2005; Krashen, 1985, 2004; Onwuegbuzie et al., 2000; Oxford, 1990; Shmais, 2003; Tercanlioglu, 2004; Wenden, 1999). Krashen's (1985) second language acquisition model, which is widely used among educators understand and develop new teaching models, is comprised of five hypotheses that explain the language acquisition process with learnt knowledge as a monitoring device for speaking and writing the target language. Although the model is widely used, it has been criticized for its simplicity and lack of reference to cognitive based research (Krashen, 1985; Ellis, 1994; McLaughlin, 1992; Zimmerman, 1997).

Gardner's proposed motivational construct, comprised of both integrativeness and instrumental motivation, presents many significant suppositions about second language acquisition performance (Gardner, 1985). However, Gardner's model lacks the cognitive components to motivation and the "need to achieve" aspect, which is seen as an

important element to second language academic achievement (Gardner, 1985; Dorneyei, 1994; Pintrich & De Groot, 1990). Motivation is seen as a very complex construct but continues to be investigated within perceived self-efficacy and individualized difference model (Dornyei, 1994; Pintrich De Groot, 1990).

A component of motivation, according to Bandura (1991) and other researchers, is having access to appropriate strategies, which leads the student to higher expectations of learning success. Bandura and others who support the perceived self-efficacy model believe motivation along with proper strategy use leads to successful language learning (Bandura, 1991; Zimmerman, 1997). Many researchers have supported the proposed theory that "good language learners" appropriately use language-learning strategies (Chamot & O'Malley, 1994; Oxford, 1990; Rubin, 1975). Oxford (1990), along with Chamot & O'Malley (1994), has conducted vast numbers of studies on language-learning strategies (Chamot & O'Malley, 1994; Oxford, 1990). These strategies have been studied and grouped into many different handbooks and scales such as the *Cognitive Language Learning Approach* (*CALLA*) by Chamot & O'Malley (1990), which is a guided language-learning teaching handbook, and the *Strategy Inventory for Language Learning* (*SILL*). Motivation and language-learning strategies have been found to significantly affect achievement in the second language acquisition classroom (Bandura, 1989; Chamot & O'Malley, 1990; Gardner, 1990; Gardner et al., 1997; Hashimoto, 2002; Onwuegbuzie et al., 2000; Oxford, 1990; Rubin, 1975; Wenden, 1999; Zimmerman, 1990). A number of studies have used the *Attitude Motivation Test Battery* (AMTB) measure motivation as applied to second language learning (Gardner, Masgoret, & Tremblay, 1997; Hashimoto, 2002).

Numerous empirical studies investigating the relationship between language-learning strategies and second language acquisition found *Metacognitive* strategies to be the most influential (Chamot & O'Malley; Fisher, Frey, & Williams, 2002; Oxford, 1990; Pressley, 2000; Shearer, Ruddell, & Vogt, 2001; Slater & Horstman, 2002). However, very few studies examine the relationship of each individual strategy and second language acquisition (El Dib, 2004; Khalil, 2005; Shmais, 2003). There are some studies that reported a lack of evidence for the six factor *SILL*, proposing that there are eight factors rather than six factor SILL (Khalil, 2005; Woodrow, 2005). Additionally, studies have reported inconsistent results related to language-learning strategies and gender (El-Dib, 2004, Khalil, 2005; Shmais, 2003; Tercanlioglu, 2004). Demographic characteristics and gender have been found to influence language-learning strategies, motivation and second language acquisition (El-Dib, 2004, Gardner, Masgoret, & Tremblay, 1997; Khalil, 2005; Tercanlioglu, 2004; Rueda & Chen, 2005; Shmais, 2003; Oxford & Erhman, 1995; Onwuegbuzie, et al., 2000). Although demographic characteristics, language-learning strategies, and motivation have been shown to influence second language acquisition, all three are rarely examined together in one study (Gardner, Masgoret, & Tremblay, 1997). Many of the statistical analysis for the studies reported the use of ANOVA (Khalil, 2005; Oxford & Ehrman, 1995; Tercanlioglu, 2004), MANCOVA (Pintrich & De Groot, 1990), structural equation modeling (Tremblay & Gardner, 1995; Gardner, Masgoret & Tremblay, 1997), and factor analysis (El Dib, 2004). Based on the review of the literature and subsequent interpretations, the following conclusions were developed.

Conclusions

1. Krashen's socio-educational second language acquisition theory is comprised of five hypotheses which focus on how comprehensible input of a target language increases knowledge, thus increasing language acquisition (Krashen, 1982, 1987). This model has been used widely to create new models in school districts and by many second language acquisition researchers (Krashen, 1987, 2004; Griffith, 2003; Echevarria, Vogt, & Short, 2004). Many of the studies conducted consistently support the effect of the Affective filter component of Krashen's theory having a significant effect on second language acquisition (Dornyei, 1994; Krashen, 1987, 2004; Gardner, 1985, 1997, 2005; Gardner, Masgoret, & Tremblay, 1997; Griffith, 2003; Onwuegbuzie, Bailey & Daley, 2000; Oxford & Shearin, 1994; Oxford, 1990; Echevarria, Vogt, & Short, 2004).

2. Gardner's motivational model, composed of both integrativeness and instrumental motivation was based on Mowrer's (1959) concept of identification, which was used to explain a child's motivation to learn a parent's language (Gardner, 1985, 2005). This model depicts significant prediction towards second language acquisition performance (Baker, 2001; Gardner, 1985; Gardner, Masgoret, & Tremblay, 1997; Hashimoto, 2002; MacIntyre, MacMaster, & Burke, 2004; Oxford & Erhman, 1995).

3. Rubin (1975) proposed that the success of "good language learners" is attributed to the set of skills and behaviors that learners engaged in; known as strategies.

What are the strategies according to Rubin? The proposition has been supported by many researchers in the field of second language acquisition and foreign language learning as being a contributor to second language acquisition achievement (Chamot & O'Malley, Gardner & Tremblay 1994; Omaggio-Hadley, 2001; Oxford, 1990, Wenden, 1999). These strategies have been grouped by researchers such as Chamot and O'Malley (1990), Cognitive Language Learning Approach, CALLA, and extensively categorized by Oxford (1990) in the Strategy Inventory for Language Learners (SILL). The SILL model has been supported and noted as being the most frequently used model of language-learning strategies in second language acquisition research (Bremner, 1999; Chamot & O'Malley, 1990; Gardner, Masgoret, & Tremblay, 1997; Onwuegbuzie, Bailey, & Daley, 2000; Oxford, 1990; Rubin, 1975; Wenden, 1999; El-Dib 2004; Shmais, 2003; Khalil, 2005). Studies that used the SILL have found strong relationships between the frequency of language-learning strategies and academic achievement in the second or foreign language-learning classroom (Chamot & O'Malley, 1990; Gardner, Masgoret, & Tremblay, 1997; Onwuegbuzie, Bailey, & Daley, 2000; Oxford, 1990; Rubin, 1975; Wenden, 1999).

4. Although widely used, some linguist and cognitive based researchers find that Krashen's model lacks cognitive backing with very little distinction made between the acquisition and the learning process (Ellis, 1994; Mclaughlin, 1992; Zimmerman 1990, Zimmerman, 1997).

5. Although supported by some researchers, the complex aspect of motivation was said not always to be a predictor of second language acquisition when culture is introduced as a variable (Rueda & Chen, 2005). The model lacks the component of the need to achieve and does not include the cognitive aspects of motivation; which has been shown to positively contribute to motivation second language learning (Dorneyei, 1990, 1994; Pintricht, 2003).

6. Two major variables that have been associated with second language acquisition (course performance or proficiency) are language-learning strategies (Bandura, 1989; Chamot & O'Malley, 1990; Gardner, Masgoret, & Tremblay, 1997; Onwuegbuzie, Bailey, & Daley, 2000; Oxford, 1990; Rubin, 1975; Wenden, 1999; Zimmerman, 1990) and motivation (Gardner, 1985; Gardner, Masgoret, & Tremblay, 1997; Hashimoto, 2002).

7. Of the six strategies developed by Oxford (1990), *Metacognitive* strategy has found to be the most influential in improving students' learning and reading in the target language (Chamot & O'Malley 1990; Fisher, Frey, & Williams 2002; Oxford, 1990, Pressley, 2000; Shearer, Ruddell, & Vogt, 2001; Slater & Horstman, 2002).

8. There is considerable empirical support for the proposition that good language learners use many strategies (Oxford, 1990, Oxford and Green 1995, Chamot & O'Malley, 1990; Rubin, 1975).

9. Motivation has been shown to influence the acquisition of French as a second language (Gardner, 1985; Gardner, Masgoret, & Tremblay, 1997).

10. Although several studies have demonstrated a relationship between language-learning strategies and second language acquisition (Bandura, 1989; Chamot & O'Malley, 1990; Gardner, Masgoret, & Tremblay, 1997; Onwuegbuzie, Bailey, & Daley, 2000; Oxford, 1990; Rubin, 1975; Wenden, 1999; Zimmerman, 1990), very few studies examine the relationship of each individual strategy and second language acquisition (El Dib, 2004; Khalil, 2005; Shmais, 2003).

11. Generalizations have been made in past research regarding gender, reporting that women use more language-learning strategies than men (Oxford & Green, 1995; Oxford & Nyikos, 1989; Oxford, 1994). However, reports are conflicting where in some studies women and men displayed no significant differences within the six categories of strategies (El Dib, 2004; Nisbet, Tindall & Arroyo, 2005; Shmais, 2003), or even less frequent strategy use among women compared to men (Tercanlioglu, 2004). Some studies reported gender differences based on strategy type such as women using more memory, cognitive compensator, and metacognitive strategies (El Dib, 2004; Khalil, 2005). Thus, gender might be considered a context specific variable.

12. Gardner's (1985) *Attitude/Motivation Test Battery* (AMTB) is an established instrument for measuring the constructs of attitude and motivation as applied toward learning a second language (Gardner, 1985; Tremblay & Gardner, 1995;

Gardner, Tremblay, & Masgoret, 1997). Some evidence of convergent validity has been reported for motivation construct of the AMTB, where the motivation scale correlated at .5 or above with four different measures of second language acquisition (Gardner, 1985). Good estimates of reliability have been established for various subscales related to the AMTB motivation construct, including *Motivation Intensity* (.76), *Desire to Learn the Language* (desire to learn French DLF) (.78), and *Attitude toward Learning the Language* (Attitude towards Learning French, ALF) (.86), although no estimates have been reported for the total motivation construct (Gardner et al., 1997). Construct validity has been established for the total AMTB using structural equation modeling but has not been established for the motivation construct (Gardner & Tremblay, 1995).

13. Good estimates of reliability have been established for the whole *Strategy Inventory for Language Learning* (*SILL*), Oxford and Nyikos (1989) reported a Cronbach's alpha of .96 for the total scale in a study surveying 1200 university students, and .86 by Khalil (2005) in a study conducted in Palestine. Results of factor analysis for the SILL have been conflicting (Hsiao & Oxford, 2002; Woodrow, 2005). While Oxford maintains a six-factor structure for the *SILL*, other researchers discuss a lack of evidence for the six-factor structure (El-Dib, 2004; Woodrow, 2005).

14. Statistical data analyses used in the study of second language acquisition have been rigorous, and include ANOVA (Ehrman & Oxford, 1989, Khalil, 2005), MANOVA (Nisbett, Tindall, & Arroyo, 2005), MANCOVA (Pintrich & De

Groot, 1990), and structural equation modeling (Tremblay & Gardner, 1995; Gardner, Tremblay, & Masgoret,1997), and factor analysis (El Dib, 2004).

15. Although demographic characteristics, language-learning strategies, and motivation have been shown to increase second language acquisition, the influence of all three variables is rarely examined in one study (Gardner, Tremblay, & Masgoret, 1997).

These conclusions flowed from the review of the literature. The following recommendations for future study were made in light of the conclusions drawn from the review of the literature.

Recommendations

Propositions in the second language acquisition model by Krashen (1985) and the language-learning strategy framework by Oxford (1990) can be extended to include other variables, such as the motivation construct, as developed by Gardner (1985), and gender, followed by empirical validation of the propositions. The literature produced mixed results regarding Krashen's second language acquisition (SLA) model, which proposes that more comprehensible input, with the affective hypothesis acting as a filter, increases knowledge in a second language, and improves academic achievement in a foreign language (Carol, 2003; Krashen, 1985). A critical analysis of the literature was conducted regarding the relationship between comprehensible input within the second language acquisition model and the cognitive language-learning process, including the distinction between learning and acquisition as part of Krashen's SLA model (Ellis, 1994; Mclaughlin, 1992; Zimmerman, 1990; Zimmerman 1997). Furthermore, a meta-

analysis was conducted and organized by strategy type and its relationship to the specific hypotheses in Krashen's SLA model, and its effect on the expected course grade of second language learners.

There have been conflicting results related to the construct validity of the *Strategy Inventory for Language Learners* (SILL) (El-Dib, 2004; Hsiao & Oxford, 2002; Woodrow, 2005). Exploratory factor analysis was conducted observing the number of factors that emerged. Although reliability has been established for the subscales that comprise the motivation construct, no estimates of reliability are available for the total motivation construct. Reliability for both the motivation subscales and total scale were established.

Although construct validity has been established for the total Attitude Motivation Test Battery (AMTB) scale (Gardner, 1985), limited evidence is available for the motivation construct. Evidence of convergent validity and exploratory factor analysis were conducted to test its multidimensionality, and establish the construct validity of the motivation construct.

The language-learning strategies model and the Motivation Construct can serve as useful propositions to explain expected second language acquisition (Chamot & O'Malley, 1990; El-Dib 2004; Gardner 1985; Gardner, Masgoret, & Tremblay, 1997; Hashimoto, 2002; Krashen, 1985; Onwuegbuzie, Bailey & Daley, 2000; Oxford & Shearin, 1994; Oxford, 1990; Echevarria, Vogt, & Short, 2004; Wenden, 1999). Language-learning strategies and motivation served as an important linkage to achievement in foreign language acquisition (Gardner, Masgoret, & Tremblay, 1997; Hashimoto, 2002; Onwuegbuzie, Bailey & Daley, 2000; Oxford & Shearin, 1994;

Oxford, 1990). It has been noted that "good language learners" have a high frequency of language-learning strategies (Chamot & O'Malley, 1990; Oxford, 1990; Rubin 1975). While language-learning strategies and motivation have been found to be powerful predictors of second language achievement (Gardner, Masgoret, & Tremblay, 1997; Hashimoto, 2002; Onwuegbuzie, Bailey & Daley, 2000; Oxford & Shearin, 1994; Oxford, 1990), few studies were found to examine language-learning strategies, motivation, as well as attribute variables such as demographic characteristics simultaneously. Therefore an explanatory (correlational) study was conducted to explain the relationship among demographic characteristics, motivation, and frequency of use of language-learning strategy.

Although all six of the language-learning strategies identified by Oxford (1990) have been found to be strong contributors to second language acquisition, metacognitive strategy has been found to be the most influential in improving students' learning and reading in the target language (Chamot & O'Malley 1990; Fisher, Frey, & Williams 2002; Oxford, 1990, Pressley, 2000; Shearer, Ruddell, & Vogt, 2001; Slater & Horstman, 2002). Therefore an explanatory (correlational) study was conducted testing the order of importance of the SILL language-learning strategies in predicting second language acquisition.

Conflicting empirical results were found about the relationship between gender and language-learning strategies of second language acquisition students (El Dib, 2004; Nisbet, Tindall & Arroyo, 2005; Shmais, 2003). Some studies found women and men displayed no significant differences within the six categories of strategies (El Dib, 2004; Nisbet, Tindall & Arroyo, 2005; Shmais, 2003), while others found less frequent strategy

use among women compared to men (Tercanlioglu, 2004). Some studies reported gender differences based on strategy type, such as women using more memory, cognitive compensator, and metacognitive strategies (El Dib, 2004; Khalil, 2005). Therefore, a non-experimental, quantitative, exploratory (causal-comparative) study was conducted with gender as a context specific variable determining whether women have a significant higher frequency of use of language-learning strategies than men for the total *Strategy Inventory for Language Learning* (SILL) and for each of the six individual strategies.

Proposed Research Strategy

Several of the recommendations above were implemented for this study. An explanatory (correlational) and exploratory (comparative) research design was proposed to test hypotheses related to the following: 1) the influence of learning strategies, motivation, and attribute variables on expected course grade; 2) the order in which language-learning strategies may predict language acquisition; and 3) the difference in frequency of strategy used between men and women.

First, to address the shortage of empirical literature where several variables that affected second language acquisition (expected course grade) were tested simultaneously, stepwise multiple regression analyses was used to test for an explanatory relationship between student demographic characteristics, language experience, motivation, language-learning strategy used, and expected course grade.

Second, to test whether metacognition was a stronger predictor of second language acquisition (expected course grade) than other language-learning strategy types, hierarchical multiple regression was used to examine the order of importance of the six

language-learning strategies in predicting the expected course grade of English-speaking college students who are learning a romance language.

Finally, to address the conflicting empirical results found between gender and language-learning strategies, the study included gender as a context specific variable determining whether women had a significant higher frequency of use of language-learning strategies than men for the total *SILL*, and for each of the six individual strategies. Independent samples *t*-tests were used to test whether women have significantly higher frequency of use of language-learning strategies (total *SILL* score and each individual strategy) than men.

In addition, there have been conflicting results regarding the construct validity of the *Strategy Inventory of Language Learning* (*SILL*) (Oxford, 1990), as well as limited evidence about the construct validity of the Motivation construct by Gardner (1990). Evidence of construct validity for the Motivation construct and its three sub scales, as well as the SILL and its six individual strategies, was established using exploratory factor analysis. The theoretical framework that will be used to guide this study is presented in the following section.

Theoretical Framework

Krashen's Second Language Acquisition Theory (1982) consists of the following five hypotheses to explain the process of second language acquisition: 1) the Acquisition-Learning Hypothesis; 2) the Monitor Hypothesis; 3) the Natural Order Hypothesis; 4) the Input Hypothesis; and 5) the Affective Filter Hypothesis. These five hypotheses explain how certain internal (innate ability to decode between languages) and external (simplified

material taught to the learner) factors either enable or hinder the second or foreign language-learning process (Krashen, 1985, 2004).

Language acquisition in first or primary language occurs as a natural result of extended exposure to language (Krashen 1982, Chomsky 1986, Hakuta, 1986). Second Language Acquisition Theory found that extended exposure is very important in developing language in a student regardless of age. It may occur with some ease with children more than adults, but the constant mimicry of sounds and utterance of a new language can only be facilitated through constant interaction, exposure, and practice of the target language (Brecht, Davidson, & Ginsberg 1993, Chamot & O'Malley, 1990, Wenden, 1999). This theory established that the more hours of exposure to the target language, the greater the performance and achievement in the second or foreign language learning classroom (Brecht, Davidson, & Ginsberg 1993; Chamot & O'Malley, 1990; Krashen, 1994; Onwuegbuzie, Bailey, & Daley, 2000; Wenden, 1999).

Cognitive Social Learning Theory (Bandura, 1989), which stems from Social Cognitive Theory (Bandura & Walter, 1963) has been extensively cited and empirically tested. Bandura's work focuses heavily on behavior and methods to stimulate behavioral change, such as motivation (Bandura, 1989). His theory is comprised of the following three guiding principles: 1) understand and predict individual and group behavior; 2) identification of methods where behaviors can be modified or changed; and 3) the development of personality, behavior, and health promotion (Bandura, 1977, 1989).

Gardener's Second Language Acquisition Theory (1985) contains the following five constructs: 1) integrativeness; 2) attitude towards learning the language; 3) desire to learn the language; 4) instrumental orientation, which refers to an interest in language-

learning for pragmatic reasons; and 5) language anxiety, which refers to the anxiety reaction of the individual when called upon to use the target language. These constructs have been shown to have an affect on second or foreign language achievement (Gardner, Masgoret & Tremblay, 1997; Hashimoto, 2002). The socio-educational second language acquisition model was a catalyst for the development of the *Attitude Motivation Test Battery* (AMTB), which was created to assess various individual variable differences within the second language-learning classroom (Gardner, 1985; Gardner, Masgoret & Tremblay, 1997; Hashimoto, 2002)

Language-learning strategies are techniques or steps taken by the student to improve their own learning (Oxford, 1990; Rubin 1975). The term language-learning strategies has been used extensively in Oxford's research study to include naturalistic practices such as guessing and memory strategies which Oxford posits are equally useful to both learning and acquisition language skills (Chamot & O'Malley, 1990; Oxford, 1990). Many researchers have sought to classify the language-learning strategies in general, but Oxford (1990) created the most comprehensive classification of strategies called the *Strategy Inventory for Language Learners* (*SILL*), which contains six types of strategies, classified into two sub-groups of direct and indirect strategies. The three sub-scales classified as direct language-learning strategies are *memory*, *cognitive*, and *compensation*, and the three sub-scales classified, as indirect language-learning strategies are *metacognitive*, *affective*, and *social* strategies.

A number of factors have been shown to influence performance in the second or foreign language classroom. Gardner (1985) found motivational components such as attitudes towards learning the language, desire to learn the language, and motivational

intensity had a positive influence on performance in the language-learning classroom. Other researchers have also found that motivation affects performance among those in the second or foreign language-learning classroom, with attitude as a situational support (Gardner, 1985; Gardner, Masgoret, & Tremblay, 1997). Bandura's SLT model (1989), which emphasizes methods that stimulate behavioral change, such as motivation and self-perception, focuses on the strategies learners use to become self-regulated in their learning. The factors related to this theory have been found to have an influence on second or foreign language-learning performance (Bandura, 1989; Gardner, Hashimoto, 2002; Masgoret & Tremblay, 1997; Zimmerman, 1990). Rubin (1975) attributed the success of "good language learners" to the set of skills and behavior that learners engaged in, also known as strategies. A number of researchers have found a strong positive relationship between language-learning strategies and academic achievement and proficiency in the second or foreign language-learning classroom (Chamot & O'Malley, 1990; Gardner, Masgoret, & Tremblay, 1997; Onwuegbuzie, Bailey, & Daley, 2000; Oxford, 1990; Rubin, 1975; Wenden, 1999).

Based on the theories and models related to factors that influence second language acquisition and because empirical studies have found that demographic characteristics may influence performance (Arroyo, Nisbet, & Tindall, 2005; El-Dib, 2005; Khalil, 2005; Shmais, 2003; Tercanlioglu, 2004), the following proposition was tested in this study: language-learning experiences, greater motivation, more positive attitudes, and greater frequency of use of language-learning strategies (*memory, cognitive, compensation, metacognitive, affective,* and *social* strategies) lead to higher levels of performance among second language learners.

Based on theoretical and empirical work by language-learning strategy researchers, *metacognitive* strategies have been found to be the most frequently used strategy among good language learners (Chamot & O'Malley, 1990; El-Dib, 2005; Khalil, 2005; Oxford, 1990; Rubin, 1975; Shmais, 2003; Tercanlioglu, 2004). Few researchers have ordered the strategies according to prediction of academic performance in the second language-learning classroom. The second proposition tested whether metacognition had the greatest influence on performance and whether the other strategies fell into the following order: *Metacognitive* strategies having the greatest impact on the expected course grade of second language learners, followed by *social* strategies, *cognitive* strategies, *memory* strategies, *affective* strategies, *memory* strategies, and *compensatory* strategies.

Research questions and hypotheses were proposed about factors effecting language-learning strategy used and expected course grade. These were based on the key gaps in the literature, the recommendations addressed in this study, and the theoretical framework used to guide this study. A hypothesized model of the relationship between demographic characteristics, language learning experience, motivation, language-learning strategies, and expected course performance of second language learners followed the hypotheses (see Figure 2-1).

Research Questions

RQ 1 What are the demographic characteristics, language-learning experiences, motivation, second language-learning strategies used (*memory, cognitive, compensation, metacognitive, affective*, and *social* strategies), and expected course grade of English-speaking college students learning a romance language?

RQ 2 Does expected course grade differ significantly according to the demographic characteristics, language-learning experience, motivation, or language-learning strategies of English-speaking college students learning a romance language?

RQ 3 Does the frequency of language-learning strategies used differ significantly according to the demographic characteristics, language-learning experience, or motivation, of English-speaking college students learning a romance language?

RQ 4 Are demographic characteristics, language-learning experience, and motivation, significant explanatory variables of the frequency of use of language-learning strategies (*memory, cognitive, compensation, metacognitive, affective*, and *social*) of English-speaking college students learning a romance language?

RQ4a Are demographic characteristics, language-learning experiences, and motivation, significant explanatory variables of the frequency with which *memory language- learning strategies* are used by English-speaking college students learning a romance language?

RQ_{4b} Are demographic characteristics, language-learning experiences, and motivation, significant explanatory variables of the frequency with which *cognitive language learning strategies* are used by English-speaking college students learning a romance language?

RQ_{4c} Are demographic characteristics, language-learning experiences, and motivation, significant explanatory variables of the frequency with which *compensation language-learning strategies* are used by English-speaking college students learning a romance language?

RQ_{4d} Are demographic characteristics, language-learning experiences, and motivation, significant explanatory variables of the frequency with which *metacognitive language-learning strategies* are used by English-speaking college students learning a romance language?

RQ_{4e} Are demographic characteristics, language-learning experiences, and motivation, significant explanatory variables of the frequency with which *affective language-learning* strategies are used by English-speaking college students learning a romance language?

RQ_{4f} Are demographic characteristics, language-learning experiences, and motivation, significant explanatory variables of the frequency with which *social language-learning strategies* are used by English-speaking college students learning a romance language?

Hypotheses

H1 Demographic characteristics, language-learning experiences, motivation, and frequency of use of language-learning strategies (*memory, cognitive, compensation, metacognitive, affective*, and *social* strategies) are significant

explanatory variables of the expected course grade of English-speaking college students learning a romance language.

H2 Of the six language-learning strategies explanatory variables, the order of importance in predicting the expected course grade of English-speaking college students learning a romance language is as follows: *metacognitive strategies> social strategies >cognitive strategies>memory strategies>affective memory> compensation strategies*.

H3 Women will have significantly higher frequencies of use of language-learning strategies (total *SILL* score and each individual *SILL* strategy) than will men.

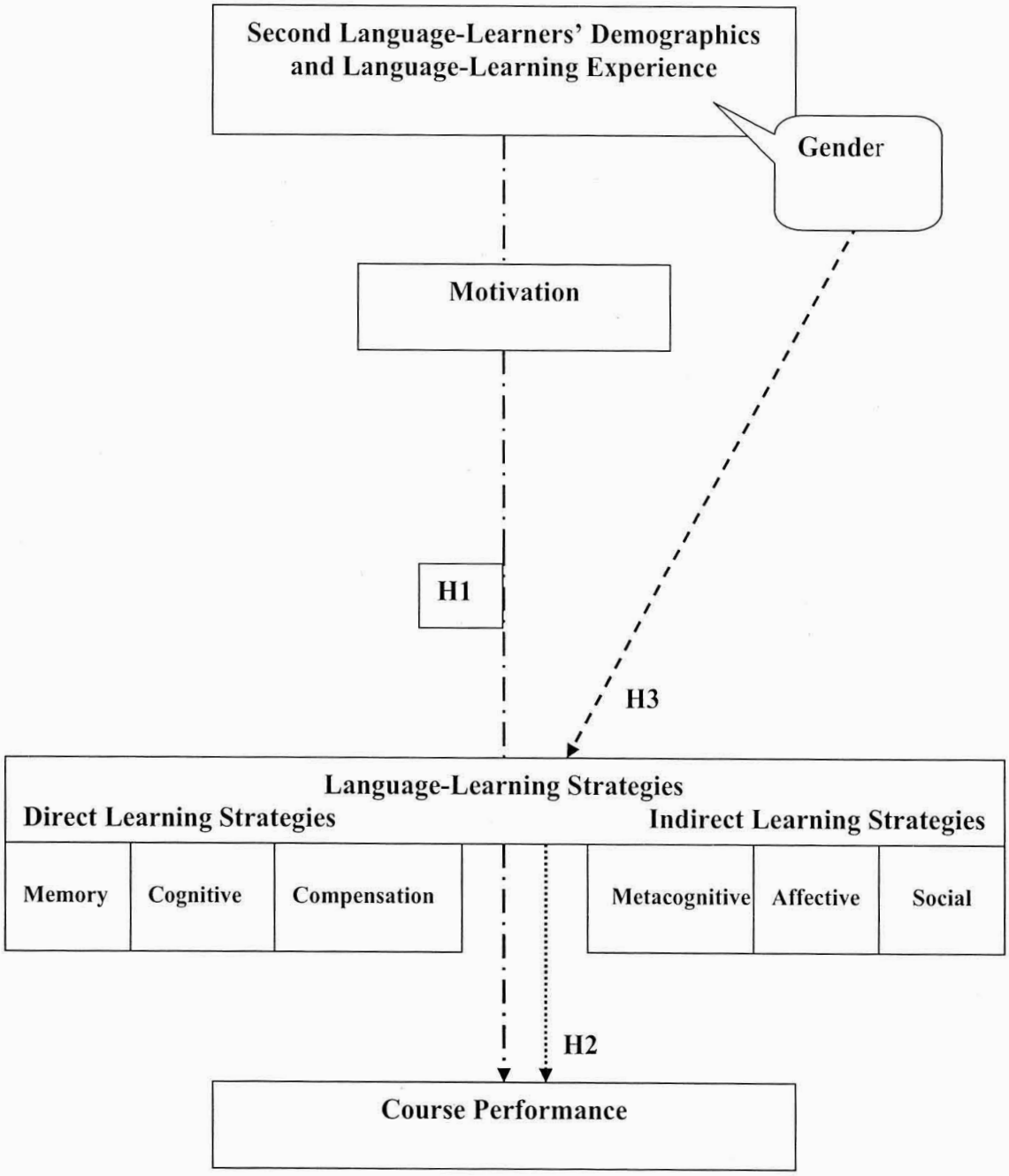

Figure 2-1. Hypothesized model of the relationship between demographic characteristics, language-learning experiences, motivation, language-learning strategies, and expected course performance of second language learners.

Chapter II provided a review of the literature and theoretical framework leading to the propositions tested via the research questions and hypotheses addressed in this study. The major gaps in the literature limited primarily to a shortage of empirical studies focused on the relationship between individual language-learning strategies and performance as well as a shortage of studies that simultaneously examined various factors that have been shown to influence performance. The theoretical framework presented in this section emphasized the relationship between sociopsychological factors, language-learning theories, and performance. Chapter III presents the methodology employed in answering the research questions and testing the hypotheses for this study about the relationship between the frequency of language-learning strategy use and expected course grade among English-speaking college students learning a romance language.

CHAPTER III

RESEARCH METHODOLOGY

Chapter III presents a description of the research methods used in this study of the relationship among motivation, language-learning strategies and expected course grade among English-speaking college students learning a romance language. The research questions and hypotheses, which appear at the end of Chapter II, evolved from the gaps in the literature. This chapter begins with a discussion of the research design, and continues with the study's population and sampling plan, instrumentation, data collection procedures and ethical aspects, data analysis methods, and evaluation of this study's research methods.

Research Design

An exploratory (comparative) and explanatory (correlational) research design was conducted. The entire accessible population of first and second year English-speaking college students learning a romance language was invited to participate in a survey to answer the research questions and test the hypotheses. The final data-producing sample was self-selected, consisting of those who both agreed to participate and returned the survey and students that were present on the day of data collection.

The *Second Language Acquisition Survey* has four parts (see Appendix A). Demographic variables of gender, age, college grade level, college major, race, and ethnicity was measured by *Part I: Demographic Characteristics*, developed by the researcher (RQ1, attribute variables in RQ2, and RQ3, and explanatory variables in RQ 4 and H1). Language-learning experience was measured by *Part II: Language-Learning Experience and Expected Course Grade*, developed by the researcher (Research Question

1, attribute variables in RQ 2 and RQ3, and explanatory variables in RQ 4 and Hypothesis 1). Part II also measured expected course grade (dependent variable in RQ2, H1 and H2). *Motivation* (RQ1, independent variable in RQ 2 and RQ3, explanatory variable in RQ4 and H1) was measured by the Motivation scale from the AMTB (Part III of the survey), developed by Gardner (1985). *Language-Learning Strategies* (Part III of the survey) was measured by the Strategy Inventory for Language Learners (SILL), developed by Oxford (1990). (RQ1, independent variable in RQ2, dependent variable in RQ3 and H3, explanatory variable in H1, predictor variable in H2).

To answer ***Research Question 1***, frequency distributions, measures of central tendency, and variability was used to report the demographic characteristics, language-learning experience, motivation, second language-learning strategies used (*memory, cognitive, compensation, metacognitive, affective*, and *social strategies*), and expected course grade of English-speaking college students learning a romance language. Separate analyses were conducted for the total scale, direct and indirect learning strategies, and the six individual learning strategies.

To answer ***Research Question 2***, independent *t*-tests (for two group comparisons such as gender and ethnicity), ANOVA with LSD and Scheffe post hoc comparisons (for three or more group comparisons such as race) was used to see if expected course grade differs significantly according to the demographic characteristics, language-learning experiences, motivation, or language-learning strategies of English-speaking college students learning a romance language. Separate analyses were conducted for the total scale, direct and indirect learning strategies, and the six individual learning strategies.

To answer ***Research Question 3***, independent *t*-tests (for two group comparisons such as gender and ethnicity), ANOVA with LSD and Scheffe post hoc comparisons (for three or more group comparisons such as race) was conducted to see if the frequency of language-learning strategies used differs significantly according to the demographic characteristics, motivation, or language-learning experiences of English-speaking college students learning a romance language. Separate analyses were conducted for the total scale, direct and indirect learning strategies, and the six individual learning strategies.

To answer ***Research Question 4***, multiple regression analyses with the stepwise method were used to see if demographic characteristics, language-learning experiences, and motivation, are significant explanatory variables of the frequency of use of language-learning strategies (*memory, cognitive, compensation, metacognitive, affective*, and *social strategies*) used by English-speaking college students learning a romance language. Separate regression analyses will be conducted for the total scale, direct and indirect learning strategies, and the six individual learning strategies.

To test ***Hypothesis 1***, multiple regression analyses using the stepwise method was used to examine whether demographic characteristics, language-learning experiences, motivation, and frequency of use of language-learning strategies (*memory, cognitive, compensation, metacognitive, affective*, and *social strategies*) are significant explanatory variables of the expected course grade of English-speaking college students learning a romance language.

To test ***Hypothesis 2***, multiple regression analysis using the hierarchical (forward) method was used to examine the order of importance of the six language-learning

strategies in predicting the expected course grade of English-speaking college students learning a romance language.

To test ***Hypothesis 3***, independent samples *t*-tests were used to test whether women had significantly higher frequency of use of language-learning strategies (total SILL score and each individual strategy) than men.

Cronbach's alpha was used to provide estimates of the internal consistency of the total *SILL*, direct and indirect strategies, and each of the six individual language-learning strategies and the motivation scales. Factor analysis was conducted to test for the emergence of six factors and to establish construct validity for the *SILL* and for the motivation scales.

Population and Sampling Plan

Target Population

The target population for this study consists of English-speaking college students learning a romance language as part of their studies at George Mason University in northern Virginia. Average semester enrollment of college students learning a romance language is approximately 1,039 students. The languages offered at the university include Spanish, French, Italian, Latin, German, Chinese, Japanese, Russian, and Arabic. The target population for this study was approximately 697 first and second year English-speaking college students who are enrolled in Romance Language classes. Generally speaking, Romance languages consist of those languages rooted in Latin, such as Spanish, Portuguese, French, Italian, and Romanian (FCPS, 1991). Table 3-1 shows estimated average semester enrollment of first and second year English-speaking college

students learning a romance language of the four Romance languages offered at the university, as well as enrollment in non-Romance languages.

Table 3-1

Average Semester Enrollment of Second Language Learners

Student Enrollment	Average Freshman per Semester	Average Sophomore per Semester	Total Average per Semester	%
Romance Languages	**314**	**383**	**697**	**67%**
Spanish	182	266	448	64%
French	90	80	170	24%
Italian	32	24	56	8%
Latin	11	14	24	3%
Non-Romance Languages	**210**	**188**	**342**	**33%**
Total	**599**	**571**	**1039**	**100%**

Accessible Population

For this study, the plan was to invite the entire target population to participate. The actual enrollment of college students in the Spanish, French and Italian classes was 759, higher than the estimated 697 students. However, the accessible population was limited to students whose instructors provided the researcher with written consent to access their classrooms. Students who were in attendance the day of administration of the survey participated in the study. This resulted in an accessible population of 256 students, rather than 759.

Sampling: Total Accessible

There was no sampling plan for this study. The accessible population and the data producing consisted of the students whose professors agreed to participate in the study. The final data-producing sample consisted of the students who were present during data collection and whose professors consented to participate in the study. Because the entire accessible population (those of the 256 present the day of data collection) was invited to participate, sampling errors and bias were expected to be minimized. The final data-producing sample was self-selected, based on those who agreed to participate in the study. Of the 256 surveys distributed, a total of 255 were returned, for a 99.6% response rate. The researcher administered the *Second Language Acquisition Survey* to the accessible population during the last 20 minutes or less of class time. The students' identities were kept confidential from the researcher during data collection, students were asked not to provide any identifying information.

Sample Size

An adequate sample size is necessary for at least two reasons--to conduct data analysis and for external validity. This study included the use of multiple regression analyses to answer research questions and test hypotheses. There were 14 explanatory variables including six demographic characteristics (attribute variables), previous language-learning experience, motivation, and the six language-learning strategies (*memory, cognitive, compensation, metacognitive, affective,* and *social strategies*) in this study. To estimate the minimal sample size needed to conduct multiple regression analysis the number of explanatory variables was multiplied by 20 (Garson, 2007). Based on that requirement, the calculation was 20 x 14 = 280. Another formula used for

estimating sample size to conduct multiple regression analysis was based on having a number of cases greater than eight times the number of independent variables plus 50 (Green, 1991). Based on this requirement, the calculation was 50 + (8 x 14) = 162.

To estimate the sample size needed to conduct exploratory factor analysis, the number of items in the longest scale was identified. This was the 50-item *Strategy Inventory for Language Learning.* For exploratory factor analysis, the range was 3 to 20 times the number of items, or in this case, 150 to 1000 (Mundfrom, Shaw, & Ke, 2005).

To estimate the sample size needed for population validity, based on a population size of 697, according to Gay and Airasian (2001), an adequate sample size would be 248 for a population of 700, but a sample size of 500 would be an even more confident sample size (p. 135). In summary, to conduct the statistical analysis, and to ensure a sufficient size sample based on the population size, a range of 280 to 500 represented an adequate and optimal total sample range, respectively.

Eligibility Criteria and Exclusion Criteria

Inclusion criteria. Prospective participants were included in the study if they met the following criteria:

1. Were 18 years old or older.
2. Were English-speaking college students learning a Romance language as a second language.
3. Were able to read and write in English.
4. Were present in class on the date of data collection.

Exclusion criteria. Prospective participants were not included in the study if they met the following criteria:

1. Were under 18 years of age.
2. Were not English-speaking college students learning a Romance language as a second language.
3. Were unable to read and write in English.
4. Were not present in class on the date of data collection.

Setting

The survey was distributed to first and second year English-speaking college students who were taking Romance languages while the students were in their respective Romance language classes. Average class size at the four-year state university is 20-25 students. The length of the class period ranges between 50 minutes (MWF) and an hour and 15 minutes (TR), which provided sufficient time to complete the survey.

Instrumentation

This study included the use of a four-part survey, organized as follows: 1) Part 1: *Demographic Characteristics*, completed by the participants for use in describing the sample and setting characteristics, and exploring the influence of demographic characteristics on participant responses; 2) Part 2: *Language-Learning Experience and Expected Course Grade,* asked participants to self-report previous language learning experience and expected course grade for the purpose of exploring the relationship between these variables and language-learning strategy; 3) Part 3: *Motivation*, which is a measurement scale adapted from part of the Motivation construct from the *Attitude/Motivation Test Battery* (*AMTB*) developed by Gardner (1985); and 4) Part 4: *Language Learning Strategies* which used the *Strategy Inventory for Language Learning* (*SILL*) developed by Oxford (1990) to measure the use of language-learning strategies.

Table 3-2 shows the constructs, instrument developers, measures, and number of items and score range for the *Second Language Acquisition Survey*.

Table 3-2

Constructs of the Second Language Acquisition Survey

Part	Construct	Instrument Developers	Measures	Number of Items and Score Range
1	**Demographic Characteristics**	Researcher		(6 variables)
			Fill in the Blank: Age, College Major	
			Dichotomous: Gender, Ethnicity	2
			Multiple Choice: Race, Grade Level	2
2	**Language-Learning Experiences**	Researcher		
	and		Years studied the language (Fill in the Blank)	1
	Expected Course Grade			
			Expected Course Grade (11 point letter grade scale)	1 A to F (4.0 to 0)
3	**Motivation**	Gardner, R., 1985		30 (30-130)
	Motivational Intensity		3-point degree of effort, rating scale	10 (10-30)
	Desire to Learn the Language		3-point degree of effort, rating scale	10 (10-30)
	Attitudes Toward Learning the Language		7-Point Likert-type Rating Scale	10 (10 to 70)
4	**Language Learning Strategies**	Oxford, R., 1990	5 – Point Likert-type Rating Scale	50 50 - 250
	Direct Strategies			29-145
	Memory			9
	Cognitive			14
	Compensation			6
	Indirect Strategies			21 (21-105)
	Metacognitive			9
	Affective			6
	Social			6

Part 1: Demographic Characteristics

There are six variables that were measured by Part I, *Demographic Characteristics* (see Appendix A, Part I). Participants were asked to provide their gender, age, college grade level, college major, race, and ethnicity for the purpose determining whether a relationship existed among the demographic characteristics of the sample and language-learning strategy use. Age was measured in years, with respondents filling in the blank for that question. Participants also indicated their college major by filling in the blank. Those who were undecided checked a box with that option to avoid the question potentially going unanswered. Gender and ethnicity were dichotomous variables, where participants checked one of two boxes. For the college grade level and race, respondents selected the multiple-choice answer that best described them, by putting a checkmark in front of that answer.

Part 2: Language-Learning Experience and Expected Course Grade

Two variables were measured by Part 2, *Language-Learning Experience and Expected Course Grade* (see Appendix A, Part II). Participants were asked to self-report previous language-learning experience and expected course grade for the purpose of exploring whether a relationship existed between these variables and was measured by students filling in the blank with the number of years spent studying the language, their primary language, and the number of languages spoken. Students provided their expected course grade by selecting the appropriate grade from an 11-point letter grade scale, with assigned quality points ranging from 0 for an F to 4.0 for A.

Part 3: Motivation

Description

Part 3 of the survey about the motivation of English-speaking college students who are second language learners was measured using the ***Motivation*** construct from Gardner's *Attitude/Motivation Test Battery* (AMTB) (1985). The ***Motivation*** construct consisted of 30 items, with scores ranging from 30 to 130, where low scores are associated with low motivation toward learning a second language, and higher scores are associated with higher motivation toward learning a second language. The ***Motivation*** construct was comprised of the following three subscales: 1) *Motivational Intensity*; 2) *Desire to Learn the Language*; and 3) *Attitudes Toward Learning the Language*.

Two of the subscales, *Motivation Intensity*, and *Desire to Learn the Language*, use a 3-point degree of effort rating scale, with items scored as 1, 2, or 3. The other subscale, *Attitudes Toward Learning the Language*, used a seven-point Likert-type scale with the following seven response categories: Strongly Disagree; Moderately Disagree; Slightly Disagree; Neutral; Slightly Agree; Moderately Agree; and Strongly Agree. The numeric assignment for each response category depended upon whether the item was positively or negatively worded, and ranges from 1 to 7. Each of the three sub scales also contained five positively worded items, and five negatively worded items. Sub scale scores ranged from 10 to 30 for the multiple-choice format, and 10 to 70 for the Likert-type scale format.

The *Motivational Intensity* sub-scale consisted of a three-point degree of effort rating scale, which consisted of items worded in a multiple-choice format and was presented in a random order (Gardner 1985). Each of the ten items had three response

choices that are scored from 1 to 3. Total scale scores ranged from 10 to 30. Higher scores represented considerable effort made towards learning the second language while a lower score displayed insignificant effort towards learning the second language (Gardner, 1985; Gardner, Masgoret, & Tremblay, 1997). A sample of the 3 point degree of effort rating scale was "I actively think about what I have learned in my French class," with choices of response being a) very frequently (3 points); b) hardly ever (1point); or c) once in a while (2 points) (Gardner, 1985, Appendix A.2).

The *Desire to Learn the Language* sub-scale also a 3-point degree of effort rating scale consisted of items presented in random order (Gardner 1985). Again, each item choice was scored from 1 to 3, so that total scale scores ranged from 10 to 30. Higher scores represented considerable effort made learning the second language while lower scores indicated an insignificant effort towards learning the second language (Gardner, 1985; Gardner et al., 1997). A sample item was "During French class, I would like" with response choices of a) to have a combination of French and English spoken (2points); b) to have as much English as possible spoken (1points); or c) to have only French spoken (3points) (Gardner, 1985, Appendix A.2).

The *Attitudes Toward Learning the Language* scale also consisted of ten items, but unlike the other two motivation subscales, this scale used a seven-point Likert scale with the following response categories: Strongly Disagree; Moderately Disagree; Slightly Disagree; Neutral; Slightly Agree; Moderately Agree; and Strongly Agree (Gardner, 1985). This sub scale contained five positively worded items (report numbers of items), and five negatively worded items (report the numbers of items) making it a total of 10 items. A sample of a positively worded item was "Learning French is really great,"

(Gardner, 1985, Appendix A.1), where Strongly Disagree=1; Moderately Disagree=2; Slightly Disagree=3; Neutral=4; Slightly Agree=5; Moderately Agree=6; and Strongly Agree=7. A sample of a negatively worded item was "I hate French'" where Strongly Disagree=7; Moderately Disagree=6; Slightly Disagree=5; Neutral=4; Slightly Agree=3; Moderately Agree=2; and Strongly Agree=1 (Gardner, 1985; Gardner et al., 1997). The possible range of scores was 10 to 70 with higher scores indicating a more positive attitude towards learning the target language than lower scores (Gardner, 1985).

Reliability

Gardner et al. (1997) conducted a study of 82 female and 20 male university students enrolled in introductory French and reported separate coefficient alphas for each of the three ***Motivation*** construct sub-scales, but did not report coefficient alphas for the total ***Motivation*** construct. The reported Cronbach's alpha for the *Motivation Intensity* scale was .76 (Gardner et al., 1997). For *Desire to Learn the Language* (desire to learn French DLF) the calculated Cronbach's alpha was .78 (Gardner et al., 1997). The reported Cronbach's alpha for *Attitude toward Learning the Language* (Attitude towards Learning French, ALF) was .86. For this study, estimates of reliability for the total *Motivation* construct and its three subscales were reported.

Validity

Although validity had been established for the total AMTB scale (Gardner, 1985), limited evidence was available for the *Motivation* construct. Gardner (1985) reported evidence of convergent validity of the motivation construct with four measures using a sample of approximately 5,000 middle and high school students. The four measures and their correlations to the *Motivation* construct were as follows: 1) French Grade (.53); 2)

French Achievement (.50); 3) Speech Fluency (.56); and 4) Self-Reported French Proficiency (.64). This study examined evidence of convergent validity by correlating *Motivation* scores with expected course grade.

Although Gardner had treated *Motivation* as a three-dimensional construct comprised of *Motivational Intensity*, *Desire to Learn the Language*, and *Attitude Toward Learning the Language* (Gardner, 1985), Gardner and Tremblay (1995) used structural equation modeling to expand the motivation construct. Results suggested that while the .85 loading of *Motivational Intensity* on the latent variable of Motivational Behavior indicated that *Motivational Intensity* reflects Motivational Behavior, the variables of *Desire to Learn the Language* and *Attitude Toward Learning the Language* (Valence) mediated the relationship between Language Attitudes and Motivational Behavior (Gardner & Tremblay, 1995). In this study, further evidence of construct validity for the *Motivation* construct and its three sub-scales was established using exploratory factor analysis to test multidimensionality of the *Motivation* construct.

Part 4: Language Learning Strategies

Description

Part 4, *Language-Learning Strategies,* was measured by the *Strategy Inventory for Language Learning* (*SILL*), which was developed for the United States Army Defense Language Institute, to measure the use of language-learning strategies before and after language training (Oxford, 1990). There are two versions of the *SILL*, a 50-item scale for those learning English as a second or foreign language, and an 80-item scale for native English speakers learning a second or foreign language (Oxford, 1990; Shmais, 2003). This study utilized the 50-item version of the *SILL*.

The 50-item *SILL* is a 5-point rating scale consisting of all positively worded items. Response categories are the following: 1= never or almost never true of me; 2= usually not true of me; 3= somewhat true of me; 4= usually true of me; and 5= always or almost always true of me. Total *SILL* scale scores ranged from 50 to 250. Higher scores indicated greater use of strategy inventory items, while lower scores indicated a less use of strategy inventory items (Oxford, 1990).

The *SILL* contained six sub scales organized into direct and indirect language-learning strategies (Oxford, 1990; Shmais, 2003). The three sub-scales classified as direct language-learning strategies are *Memory* (9 items), *Cognitive* (14 items), and *Compensation* (6 items) strategies. There are a total of 29 items classified as direct language-learning strategies, with scores ranging from 29 to 145. Higher scores indicated greater use of direct language-learning strategies, while lower scores indicated less use of direct language learning strategies (Oxford, 1990).

The three sub-scales classified as indirect language-learning strategies are *Metacognitive* (9 items), *Affective* (6 items), and *Social* (6 items) strategies. There are a total of 21 items classified as indirect language-learning strategies, with scores ranging from 21 to 105. Higher scores indicated greater use of indirect language-learning strategies, while lower scores indicated less use of indirect language-learning strategies (Oxford 1990).

Memory strategies such as grouping or using imagery have a highly specific function: helping students store and retrieve new information (grouping, sounds in memory, structured review and physical response) (Oxford, 1990; Shmais, 2003). *Cognitive* strategies, such as summarizing or reasoning deductively, enabled learners to

understand and produce new language by many different means. This strategy was said to be responsible for internal mental processes and the production of taking notes and messaging (repeating, quick retrieval of information and analyzing) (Oxford, 1990; Chamot & O'Malley, 1990). *Compensation* strategies, like guessing or using synonyms, allow learners to use the language despite their often-large gaps in knowledge (Oxford, 1990; Shmais, 2003).

Metacognitive strategies allow learners to control their own cognition–that is, to coordinate the learning process by using functions such as centering, arranging, planning, and evaluating (Oxford, 1990; Chamot & O'Malley, 1990; Wenden 1999; Shmais, 2003). *Affective* strategies help to regulate emotions, motivations, and attitudes, and *Social* strategies help students learn through interaction with others (Oxford, 1990).

Reliability

Using the original 121-item scale, Oxford and Nyikos (1989) reported a Cronbach's alpha of .96 for the total scale in an experimental study using 1,200 English speaking undergraduate university students, studying various foreign languages. A Cronbach's alpha of .86 for the total scale was reported by Khalil (2005), who used an Arabic translation of the 50-item *SILL* (version 7.0), in an experimental study of 378 Palestinian students (194 high school and 184 university). For this study, Cronbach's alphas were calculated for the total scale, direct and indirect subscales, and each of the six strategy subscales.

Validity

Results of factor analysis for the *SILL* have been conflicted (Hsiao & Oxford, 2002; Woodrow, 2005). While Oxford maintains a six-factor structure for the *SILL*, other

researchers discussed a lack of evidence for the six-factor structure (El-Dib, 2004; Woodrow, 2005). Using an Arabic translation of the 50-item *SILL*, results of factor analysis from the non-experimental study of 750 Kuwaiti college students by El-Dib (2004) resulted in eight factors explaining 42.1% of the variance. Based on the debate surrounding the six-factor structure, exploratory factor analysis was conducted as part of this study to further test the construct validity of the *SILL* by seeing how many factors emerged (this is multidimensionality of this scale).

For this study, exploratory factor analyses were conducted for total six strategies, and two separate exploratory factor analysis for each of the three direct and the indirect strategies.

Procedures: Ethical Considerations and Data Collection Methods

The following section describes ethical considerations that were taken to account for the protection of all participants. Additionally, each step in the data collection process is discussed in sequence.

1. Obtaining permission to use the instruments in this study was the first required action before obtaining IRB approval and collecting data (see Appendix D for approvals).
2. The successful defense of the research study proposal was the next step in the dissertation process.
3. Obtaining permission to use the site for data collection was the next required step. The George Mason University for this study required the following before researcher was granted permission to use the site (see Appendix E for permission):

a. A letter from the Lynn University department chair confirming researcher status in good standing as a Ph.D. student at Lynn University was sent to the chair of the Department of Modern and Classical Languages at GMU.

b. A brief proposal outlining the proposed dissertation and the nature and extent of the research study conducted at GMU. The chair of the Department of Modern and Classical Languages was provided a copy of the approved dissertation proposal, along with a letter from the researcher's dissertation chair confirming that proposal's approved status.

c. A copy of the authorization to conduct this research from the Institutional Review Board of Lynn University. Lynn University's IRB did not grant IRB approval without first receiving approval from the GMU's HSRB. The researcher consulted Dr. Farazmand (IRB) on the proper procedure for this step.

4. Obtaining permission to use the site institution's name in the dissertation was the next step.

5. The next required step was to obtain approval for the study from each institution's review board. Data collection began upon approval:

    a. Lynn University's Institutional Review Board. The following required forms and the research protocol was submitted to the Lynn University Institutional Review Board for the Protection of Human Subjects (IRB) for review and approval.

- IRB Form 1 - Application and Research Protocol for Review of Research Involving Human Subjects in a New Project IRB (IRB Form I included a request for waiver of documentation of signed consent).
- Form 2 – Requested Exemption
- The Authorization for informed consent (Appendix F).

b. GMU's Human Subjects Review Board. The following required form was submitted to the site institution's HSRB for review and approval.

- Human Subjects Application Form – Application for Human Subjects Research Review, available from http://research.gmu.edu/ORSP/docs/Human%20Subjects%20Application%20Form20060817.doc

There was not a required form for exempt research. This research study was classified as exempt under the guidelines provided by the target institution at http://research.gmu.edu/ORSP/docs/Exempt%20Research20060817.doc

- Written consent from instructors allowing the researcher to access their classrooms was collected and submitted to the GMU HSRB prior to obtaining approval and access to enter the romance language classrooms at GMU.

6. Following approval from both institutions, the researcher coordinated data collection with the chair and instructors.

a. The respective classroom instructor made an announcement to the students, inviting their participation in the study. The researcher was located in the back of the classroom to answer any questions students had

before the survey. There were no identifiers on the survey to identify participants. The survey was distributed to the students during the last 15 to 20 minutes of class time.

b. The survey consisted of the survey itself (see Appendix A), along with the HSRB authorization for voluntary consent form, which described the purpose, procedures, and duration of the survey (see Appendix F). The survey took respondents between 15 and 20 minutes to complete. The authorization for voluntary consent form informed participants of the minimal risk (time to complete the survey and the possibility of sensitive questions) and the potential benefits associated with the study. The benefit of the contribution of knowledge about the relationship between motivation, language-learning strategies, and expected course grade outweighed the risk of the slight discomfort participants experienced during the survey. The ultimate goal of this study was to contribute to knowledge about motivation, language-learning strategies, and expected course grade among English-speaking college students learning a romance language. Participants' rights to voluntary participation, and to ask questions about the research were fully addressed. Participants were advised their participation would result in neither a financial gain nor loss. Participants were informed of the procedures for completing and returning the survey. Participants were informed that because the survey was confidential, they should not include any identifiers on the survey.

Because there were no identifiers in the survey, a request was made to IRB to waive documentation of a signed consent.

c. The instructor and the researcher left the room.

d. Students were provided with a box in which to deposit their survey upon completion.

7. The data collection process was conducted three weeks and was not longer than one year after IRB approval.
8. The start date for this study was April 2, 2008, following final IRB approval on the same day and the end date was April 24, 2008.
9. Within one month of the conclusion of completion of data collection, the researcher submitted the Lynn University IRB Report of Termination of Project.
10. Data analyses were performed as described in the data analysis section using SPSS 16.0. Data was stored on a password-protected computer.
11. Hard copy survey data was kept at the researcher's home in a locked file cabinet.
12. Data will be destroyed after five years.

Methods of Data Analysis

Descriptive statistics, independent *t*-tests, ANOVA with post hoc comparisons using Scheffe and LSD and stepwise multiple regression analyses were used to answer the four research questions and test hypotheses 1 and 3. Hierarchical regression was used to test Hypothesis 2. Data collected was analyzed using SPSS version 14.0 or later. Additional statistical data analysis procedures included the calculation of Cronbach's alphas and exploratory factor analysis evaluating the psychometric qualities of the scales before analysis for research questions and hypothesis testing.

Following are the notations for the constant, unstandardized coefficient, error, and variables related to this study used in regression analysis for RQ 3 and H1 and H2:

Constant, unstandardized coefficient, and error:

b_0=constant

b = unstandardized coefficient

ε_1 = error

Explanatory variables:

X_1 = Gender

X_2 = Age in years

X_3 = College Grade Level

X_4 = College Major

X_5 = Race

X_6 = Ethnicity

X_7 = Language Learning Experience

X_8 = Motivation

X_9 = Frequency of Memory Language Learning Strategy Use

X_{10} = Frequency of Cognitive Language Learning Strategy Use

X_{11}= Frequency of Compensation Language Learning Strategy Use

X_{12}= Frequency of Metacognitive Language Learning Strategy Use

X_{13} = Frequency of Affective Language Learning Strategy Use

X_{14} = Frequency of Social Language Learning Strategy Use

Outcome variables:

Y_1 = Expected Course Grade

Y_2 = Frequency of Language Learning Strategies Use

Y_3 = Frequency of Memory Language Learning Strategy Use

Y_4 = Frequency of Cognitive Language Learning Strategy Use

Y_5 = Frequency of Compensation Language Learning Strategy Use

Y_6 = Frequency of Metacognitive Language Learning Strategy Use

Y_7 = Frequency of Affective Language Learning Strategy Use

Y_8 = Frequency of Social Language Learning Strategy Use

Reliability and Validity Analysis

Data was analyzed to see if parametric assumptions were met. Nonparametric tests were conducted if data was not normally distributed or one of the other assumptions were violated (Field, 2005). The non-parametric equivalent of the independent *t* test (two group comparisons) is the Mann Whitney U, and the non-parametric equivalent for ANOVA is the Kruskal-Wallis *H* (three or more group comparison).

Coefficient alphas were used to provide estimates of the internal consistency of the total *SILL*, direct and indirect strategies, and each of the six individual language-learning strategies and the motivation scales. According to Nunnally (1970) a "good" coefficient alpha is one that is .80 or greater. Factor analysis using varimax rotation was conducted to test for the emergence of six factors and to establish construct validity for the *SILL* (total *SILL*, direct and indirect strategies) and for the motivation scales. Stevens recommended interpreting only those factor loadings whose absolute values exceed .4 (as cited in Field, 2005). Factor loadings were suppressed below .4 unless there were items that failed to load onto any factor. Factor loadings were suppressed below .3 or .35 to

permit low loading items to load onto a factor. Motivation and expected course grade were correlated to establish convergent validity. Internal consistency for expected course grade was established using parallel forms reliability.

Research Questions

Research Question 1

What are the demographic characteristics, language-learning experiences, motivation, language-learning strategies used (memory, cognitive, compensation, metacognitive, affective, and social strategies), and expected course grade of English-speaking college students learning a romance language?

Measures of frequency distributions, measures of central tendency, and variability were used to report the demographic characteristics, language-learning experience, motivation, language-learning strategies used (*memory, cognitive, compensation, metacognitive, affective*, and *social strategies*), and expected course grade of English-speaking college students learning a romance language. Separate analyses were conducted for the total scale, direct and indirect learning strategies, and the six individual learning strategies.

Research Question 2

Does expected course grade differ significantly according to the demographic characteristics, language learning experience, motivation, or language-learning strategies of English-speaking college students learning a romance language?

Independent *t*-tests (for two group comparisons such as gender and ethnicity), ANOVA with LSD and Scheffe post hoc comparisons (for three or more group comparisons such as race) were used to see if expected course grade differs significantly according to the demographic characteristics, language learning experience, motivation,

or language-learning strategies of English-speaking college students learning a romance language. Separate analyses were conducted for the total scale, direct and indirect learning strategies, and the six individual learning strategies.

Research Question 3

Does the frequency of language-learning strategies used differ significantly according to the demographic characteristics, language-learning experience, or motivation, of English-speaking college students learning a romance language?

Independent *t*-tests (for two group comparisons such as gender and ethnicity), ANOVA with LSD and Scheffe post hoc comparisons (for three or more group comparisons such as race) to see if the frequency of language-learning strategies used differs significantly according to the demographic characteristics, motivation, or language-learning experience of English-speaking college students learning a romance language. Separate analyses were conducted for the total scale, direct and indirect learning strategies, and the six individual learning strategies.

Research Question 4

Are demographic characteristics, language-learning experience, and motivation significant explanatory variables of the frequency of use of language-learning strategies (memory, cognitive, compensation, metacognitive, affective, and social) of English-speaking college students learning a romance language?

RQ_{4a} Are demographic characteristics, language-learning experience, and motivation, significant explanatory variables of the frequency with which *memory language-learning strategies* are used by English-speaking college students learning a romance language?

RQ_{4b} Are demographic characteristics, language-learning experience, and motivation, significant explanatory variables of the frequency with which *cognitive language-learning strategies* are used by English-speaking college students learning a romance language?

RQ_{4c} Are demographic characteristics, language-learning experience, and motivation, significant explanatory variables of the frequency with which *compensation language-learning strategies* are used by English-speaking college students learning a romance language?

RQ_{4d} Are demographic characteristics, language-learning experience, and motivation, significant explanatory variables of the frequency with which *metacognitive language-learning strategies* are used by English-speaking college students learning a romance language?

RQ_{4e} Are demographic characteristics, language-learning experience, and motivation, significant explanatory variables of the frequency with which *affective language-learning* strategies are used by English-speaking college students learning a romance language?

RQ_{4f} Are demographic characteristics, language-learning experience, and motivation, significant explanatory variables of the frequency with which *social language-learning strategies* are used by English-speaking college students learning a romance language?

Multiple regression analyses with the stepwise method were used to see if demographic characteristics, language-learning experience, and motivation, are significant explanatory variables of the frequency of use of language-learning strategies (*memory, cognitive, compensation, metacognitive, affective*, and *social*) used by English-speaking college students learning a romance language. Separate regression analyses were conducted for the total scale, direct and indirect learning strategies, and the six individual learning strategies.

Before variables were entered into the regression models correlations with the dependent variable was examined. For continuous variables Pearson r was used. For categorical variables eta correlation was used first. Then for categorical variables with

significant or trend relationships, dummy variables were created, then Pearson r was conducted for each of the dummy variables with the dependent variables. This resulted in identifying variables entered into the regression models. The VIF and Tolerance in each regression model was examined, and highly correlated variables removed, and the regression analysis reruned to find the best explanatory model.

The regression model for Research Question 4 used the following equation, where Y_i is used in place of the individual outcome variables (Y_2, Y_3, Y_4, Y_5, Y_6, Y_7, and Y_8) for each of the sub research questions:

$$Y_i = (b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8) + \varepsilon_i$$

Hypotheses

Hypothesis 1

Demographic characteristics, language-learning experience, motivation, and frequency of use of language-learning strategies (memory, cognitive, compensation metacognitive, affective, and social strategies) are significant explanatory variables of the expected course grade of English-speaking college students learning a romance language.

Multiple regression analyses using the stepwise method was used to examine whether demographic characteristics, language-learning experience, motivation, and frequency of use of language-learning strategies (*memory, cognitive, compensation, metacognitive, affective,* and *social strategies*) are significant explanatory variables of the expected course grade of English-speaking college students learning a romance language.

The regression model for Hypothesis 1 will use the following equation:

$$Y_1 = (b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + b_9X_9 + b_{10}X_{10} + b_{11}X_{11} + b_{12}X_{12} + b_{13}X_{13} + b_{14}X_{14}) + \varepsilon_i$$

Hypothesis 2

Of the six language-learning strategies explanatory variables, the order of importance in predicting the expected course grade of English-speaking college students learning a romance language *is as follows: metacognitive strategies> social strategies >cognitive strategies>memory strategies>affective memory> compensation.*

Multiple regression analysis using the hierarchical (forward) method was used to examine the order of importance of the six language-learning strategies in predicting the expected course grade of English-speaking college students learning a romance language. Standardized Beta values were reported based on their relative importance in the model (highest to lowest) (Field, 2005). The regression model for Hypothesis 2 used the following equation:

$$Y_1 = (b_0 + b_9X_9 + b_{10}X_{10} + b_{11}X_{11} + b_{12}X_{12} + b_{13}X_{13} + b_{14}X_{14}) + \varepsilon_i$$

Hypothesis 3

Women will have significantly higher frequencies of use of language-learning strategies (total SILL score and each individual SILL strategy) than will men.

Seven independent samples *t*-tests were used to test whether women have significantly higher frequencies of use of language-learning strategies (total *SILL* score and each individual strategy) than men.

Evaluation of Research Methods

A study's internal validity is related to the ability to control for the potential effect of variables other than the independent variable on the dependent variable (Gay &

Airasian, 2000). A study's external validity is related to the ability of the results to be generalized beyond the sample (Gay & Airasian, 2000). As a non-experimental study, this study lacked the level of internal validity found in experimental designs. The purpose of the research methods was to improve the strength of the cause-effect relationship between the independent and dependent variables and to improve population and ecological validity. The internal and external validity of this study were examined by evaluating the strengths and weaknesses of the research methods. The research methods that either strengthened or threatened internal and external validity were described.

Internal Validity

Strengths

1. The explanatory nature of the research questions in examining the relative contribution of the independent and attribute variables, which includes sample characteristics, was strength of this study.
2. The use of correlational (explanatory) and causal-comparative (exploratory) research represents strength. However, it was not as strong as an experimental study with randomization, controls, and manipulation of the independent variable.
3. The instruments used in this study had evidence of good estimates of reliability providing strength to the study. Instruments were further evaluated by calculating Cronbach's alphas, conducting exploratory factor analysis, and by analyzing those findings. Corrected item-total correlations were reviewed, especially where reverse-coded items yield low item-total correlations.

4. The statistical procedures used in data analysis (multiple regression) related to the research questions and hypotheses testing are rigorous, representing an internal strength of the study.
5. The anticipated data producing sample size of 280 to 500 students is a strength, and is sufficiently large enough to conduct the multiple regression and factor analyses planned for the study.
6. The use of a homogeneous sample of English-speaking college students who are second language learners in a Romance language classroom decreases the potential effects of extraneous variables.

Weaknesses

1. One of the instruments used in this study had limited evidence of validity, representing a weakness to the study. This study looked for further evidence of construct validity for the Motivation scale, using exploratory factor analysis to test multidimensionality of the Motivation construct. Corrected item-total correlations were reviewed, especially where reverse-coded items yield low item-total correlations.

External Validity

Strengths

1. Both population and ecological (setting) validity were strengthened by surveying the entire accessible population, increasing the ability to generalize results to the target population.

2. The survey occurred in a natural (classroom) environment, avoiding the threats to external validity associated with laboratory settings.
3. The anticipated data producing sample size of 280 to 500 students is a strength to external validity based on the size of the target population (Gay & Airasian, 2001).

Weaknesses

1. Because the final data-producing sample was self-selected (those agreeing to participate from the accessible population), a selection bias was introduced, representing a threat.
2. The use of a homogeneous sample of English-speaking college students learning a romance language represented a threat to external validity because results can't be generalized beyond that particular sample.

Chapter III presented the research methods employed in answering the research questions and testing the hypotheses for this study about the relationship between self-directed learning strategies and English-speaking college students who are learning a romance language. Chapter IV presents the results of the data analyses performed as part of this study. In addition to providing the results of analyses related to answering the research questions and testing the hypotheses, descriptive statistics of the accessible population and instrumentation and results of analyses of the psychometric characteristics of the instruments used in this study are presented.

CHAPTER IV

RESULTS

Chapter IV presents the results related to the research questions and hypotheses from the study about the relationship among motivation, language-learning strategies and expected course grade among English-speaking college students learning a romance language. Descriptive statistics, including measures of central tendency and frequency distributions, were used to answer research question one about the demographic characteristics of the sample. Independent *t*-tests (for two group comparisons such as gender and ethnicity), ANOVA with LSD and Scheffe post hoc comparisons (for three or more group comparisons such as race) were used for research question two and three where separate analyses were conducted for the total scale, direct and indirect learning strategies, and the six individual learning strategies. Multiple regression analyses were used to answer research question four and to test the hypothesized relationships between the independent variables and the dependent variable. Other analyses conducted were reliability analysis and exploratory factor analysis.

Final Data-Producing Sample

The target population for this study consisted of an estimated 697 students learning a romance language (Spanish, French, Italian, and Latin) at George Mason University. Because none of the students learning Latin participated in this study, the adjusted estimated enrollment for the target population was 674 students. The actual enrollment of English-speaking college students in the Spanish, French, and Italian classes was 759. The actual enrollment among the three languages was comprised of 20 sections of level I and II language classes. There were eight sections of Spanish, seven

sections of French, and five sections of Italian. Average actual enrollment per classroom was 16 students. The comparison of actual enrollment to estimated enrollment of the target population is shown in Table 4-1.

Table 4-1

Comparison of Estimated to Actual Enrollment in Romance Language Classes

Language	Estimated Enrollment	Actual Enrollment	Difference (number of students)	Difference %
Spanish	448	469	+21	+4.7%
French	170	204	+34	+16.7%
Italian	56	86	+30	+53.6%
Total	674	759	+85	

Although the actual enrollment was higher than projected, access to students was limited to the classes for which e-mailed approval had been obtained from the individual instructor. This resulted in an accessible population of 256 students. Of the 256 surveys distributed, a total of 255 were returned, for a response rate of 99.6%. Only one student returned a survey without completing it. The final data-producing sample consisted of 255 students from Spanish, French, and Italian language classes. These 255 participants came from 20 sections (classrooms) of level I and II language classes, and represented 33.6% of total enrollment. Data was collected from 8 sections of Spanish, 7 sections of French, and 5 sections of Italian. Students studying Italian represented the highest participation rate (81.4%). The differences in the number of students enrolled and the final data-producing sample are shown in Table 4-2.

Table 4-2

Comparison of Actual Enrollment and Data Producing Sample by Language

Language	Actual Enrollment	Data Producing Sample	% (Data Producing Sample/Actual Enrollment)
Spanish	469	100	21.3%
French	204	85	41.7%
Italian	86	70	81.4%

The proportion of participants studying French most closely matched the proportion of the actual enrollment, with a difference of only 6.4%, while the proportion of participants studying Spanish least closely matched the proportion of the actual enrollment, with a difference of -22.6%. The difference in the proportion of students from each of the languages is shown in Table 4-3.

Table 4-3

Comparison of Actual Enrollment Proportion and Data Producing Sample Proportion by Language

Language	Actual Enrollment Proportion %	Data Producing Proportion %	Proportion Who Participated (Data Producing Sample – Actual Enrollment Proportion)
Spanish	61.8%	39.2%	-22.6%
French	26.9%	33.3%	+6.4%
Italian	11.3%	27.5%	+16.2%

Psychometric Analysis of the Survey Instruments

Reliability and Validity of the Motivation Construct

Reliability of the Motivation Construct

Cronbach's alpha was calculated for the total *Motivation Construct,* and for each of the three subscales (*Motivational Intensity, Desire to Learn the Language, and Attitudes Toward Learning the Language*) by total sample, by gender, and by language. A Cronbach's alpha of .7 to .8 indicates a scale has "good" reliability (Field, 2005). For the total sample, Cronbach's alphas ranged from .646 to .936 for the total *Motivation Construct* and its subscales.

Calculated Cronbach's alpha for the total Motivation Construct was .940 for male students and .929 for female students. The *Attitudes toward Learning a Language* subscale had the highest Cronbach's alpha score for male respondents (α = .951) as well as female respondents (α = .941). The *Motivational Intensity* subscale had the lowest Cronbach's alphas for both male (α = .616) and female (α = .644) respondents. It was discovered that item 9 in the *Motivational Intensity* subscale had the incorrect response categories, making it a bad item. In light of this finding, item 9 was not included in any analyses related to answering the research questions or testing the hypotheses, and reliability was recalculated for *Motivational Intensity*. Cronbach's alphas for the *Motivation Construct* by gender are summarized in Table 4-4.

Table 4-4

Summarized Results of Reliability Analyses for the Total Motivation Construct and Motivation Subscales: By Gender

Scale	Male	Female	Total Sample
	n=80	n=163	n= 244
Motivational Intensity	.616	.644	.646
Desire to Learn the Language	.855	.857	.863
Attitudes Towards Learning the Language	.951	.941	.946
Total Motivation Construct	.940	.929	.936

The calculated alphas for the Motivation Construct for Spanish were .613, for French .700, and for Italian .643. The *Attitudes Toward Learning a Language* subscale had the highest Cronbach's alpha score by language for English-speaking college students learning Spanish (α = .953), French (α = .943), and Italian (α = .927). The lowest Cronbach's alpha was again for the *Motivational Intensity* subscale for all three languages, Spanish (α = .613), French (α = .700), and Italian (α = .643). As previously stated, item 9 in the Motivational Intensity subscale had incorrect response categories; making it a bad item. Therefore item 9 was not included in any analyses related to answering the research questions or testing the hypotheses. Calculated Cronbach's alphas for the *Motivation Construct* by language are summarized in Table 4-5.

Table 4-5

Summarized Results of Reliability Analyses for the Total Motivation Construct and Motivation Subscales: By Language

Scale	Spanish	French	Italian	Total Sample
	n=98	n=82	n=64	n= 244
Motivational Intensity	.613	.700	.643	.646
Desire to Learn the Language	.828	.883	.791	.863
Attitudes Towards Learning the Language	.953	.943	.927	.946
Total Motivation Construct	.613	.700	.643	.936

Detailed reliability analyses for each of the *Motivation* subscales and total *Motivation Construct* are presented for the total sample in the following sections. Results of reliability analyses for *Motivational Intensity* are presented next, followed by *Desire to Learn the Language,* and *Attitudes Toward Learning the Language.*

Total motivation construct. A Cronbach's alpha of .7 to .8 indicates a scale has "good" reliability (Field, 2005). The Cronbach's alpha for the total sample of the *Motivation Construct* was .936. Corrected item-total correlations should usually be greater than .30 (Garson, 2007). The *Motivation Construct* had three corrected item-total correlations below .40 (Baillie, 1997) for the total sample. Two of them, item six, "If my professor wanted someone to do an extra Spanish/French/Italian assignment, I would . . ." and item 7, "After I get my Spanish/French/Italian assignment back, I . . ." would not cause the total scale alpha to increase if deleted. Item 9, "If there were a local Spanish/French/Italian T.V. station I would . . ." had a corrected item total correlation of -.353, and would cause the alpha to increase to .940 if deleted. As previously stated, it

was discovered that the response categories for item 10 had been given for item 9; therefore item 9 was not included in any analyses related to answering the research questions or testing the hypotheses. Corrected item-total correlations for the total *Motivation Construct* for the total sample of are shown in Table 4-6.

Table 4-6

Corrected Item-total Correlations for the Motivation Construct: Total Sample (N=227)

Item	Corrected Item-Total Correlation	Alpha if Item Deleted
1. I actively think about what I have been learning in my (Spanish, French, Italian) class:	.596	.934
2. If (Spanish, French, Italian) were not taught in school, I would:	.546	.934
3. When I have a problem understanding something we are learning in (Spanish, French, Italian) class, I:	.423	.935
4. When it comes to (Spanish, French, Italian) homework, I:	.300	.936
5. Considering how I study (Spanish, French, Italian), I can honestly say that I:	.426	.935
6. If my professor wanted someone to do an extra (Spanish, French, Italian) assignment, I would:	.290	.936
7. After I get my (Spanish, French, Italian) assignment back, I:	.196	.936
8. When I am in (Spanish, French, Italian) class, I:	.342	.935
9. If there were a local (Spanish, French, Italian) T.V. station I would:	-.353	.940
10. When I hear a (Spanish, French, Italian) song on the radio, I :	.449	.935
11. During (Spanish, French, Italian) class, I would like:	.475	.935
12. If I had the opportunity to speak (Spanish, French, Italian) outside of school, I would:	.573	.934
13. Compared to my other courses, I like (Spanish, French, Italian):	.655	.933
14. If there were a (Spanish, French, Italian) club in my school, I would:	.503	.934
15. If it were up to me whether or not to take (Spanish, French, Italian), I would:	.786	.932
16. I find studying (Spanish, French, Italian):	.721	.933
17. If the opportunity arose and I knew enough (Spanish, French, Italian), I would watch (Spanish, French, Italian) TV programs:	.472	.935
18. If I had the opportunity to see a (Spanish, French, Italian) play, I would:	.469	.934
19. If there were (Spanish, French, Italian) speaking families in my neighborhood, I would:	.408	.935
20. If I had the opportunity and knew enough (Spanish, French, Italian), I would read (Spanish, French, Italian) magazines and newspaper:	.530	.934
21. Learning (Spanish, French, Italian) is really great.	.834	.929
22. I really enjoy learning (Spanish, French, Italian)	.874	.929
23. (Spanish, French, Italian) is an important part of the school program	.648	.933
24. I plan to learn as much (Spanish, French, Italian) as possible	.830	.930
25. I love learning (Spanish, French, Italian)	.886	.928
26. I hate (Spanish, French, Italian)	.788	.930
27. I would rather spend my time on subjects other than (Spanish, French, Italian)	.664	.933
28. Learning (Spanish, French, Italian) is a waste of time	.691	.932
29. I think that learning (Spanish, French, Italian) is dull	.748	.931
30. When I leave school, I shall give up the study of (Spanish, French, Italian) entirely because I am not interested in it.	.757	.931

α = .936

Motivational intensity. A Cronbach's alpha of .7 to .8 indicates a scale has "good" reliability (Field, 2005). Among the total sample of English-speaking college students learning a Romance language, the Cronbach's alpha for *Motivational Intensity* was .646. Corrected item-total correlations should usually be greater than .30 (Garson, 2007). The *Motivational Intensity* sub-scale had seven corrected item-total correlations below .40 (Baillie, 1997). However, item 9 "If there were a local Spanish/French/Italian T.V. station I would . . ." had a corrected item total correlation of -.256 and would cause the alpha to increase to .724 if deleted. As stated earlier, it was discovered that the response categories for item 10 had been given for item 9; therefore, item 9 was not included in any analyses related to answering the research questions or testing the hypotheses. Corrected item-total correlations for the total *Motivational Intensity sub-scale* for English-speaking college students learning a romance language are shown in Table 4-7.

Table 4-7

Corrected Item-total Correlations for Motivational Intensity: Total Sample

Item	Corrected Item-Total Correlation	Alpha if Item Deleted
1. I actively think about what I have been learning in my (Spanish, French, Italian) class:	.556	.568
2. If (Spanish, French, Italian) were not taught in school, I would:	.398	.601
3. When I have a problem understanding something we are learning in (Spanish, French, Italian) class, I:	.458	.591
4. When it comes to (Spanish, French, Italian) homework, I:	.362	.614
5. Considering how I study (Spanish, French, Italian), I can honestly say that I:	.499	.582
6. If my professor wanted someone to do an extra (Spanish, French, Italian) assignment, I would:	.330	.617
7. After I get my (Spanish, French, Italian) assignment back, I:	.234	.636
8. When I am in (Spanish, French, Italian) class, I:	.345	.615
9. If there were a local (Spanish, French, Italian) T.V. station I would:	-.256	.724
10. When I hear a (Spanish, French, Italian) song on the radio, I :	.295	.628

Revised motivational intensity. Among the total sample of English-speaking college students learning a Romance language, the Cronbach's alpha for *Motivational Intensity* was .65 when correlated with item 9, which is below the .7 to .8 needed for a scale to demonstrate good reliability (Field, 2005). However, item 9 "If there were a local Spanish/French/Italian T.V. station I would . . ." had a corrected item total correlation of -.256 and would cause the alpha to increase to .724 if deleted. Since it was discovered that the response categories for this item was incorrect, the reliability analysis for this sub-scale was rerun, omitting item 9. The Cronbach's alpha for revised *Motivational Intensity* was .72, bringing the alpha score above the suggested .7 to .8

representing good reliability. Corrected item-total correlations should usually be greater than .30 (Garson, 2007). When item 9 was removed and re-correlated with the other items, the sub-scale had items 4, 6, 8 and 10 corrected item-total correlation below.40, and item 7 below .30 making a total of 5 corrected item-total correlation below .40. As stated earlier item 9 was not included in any analyses related to answering the research questions or testing the hypotheses. Corrected item-total correlations for the revised *Motivational Intensity* sub-scale for English-speaking college students learning a romance language are shown in Table 4-8.

Table 4-8

Corrected Item-total Correlations for Revised Motivational Intensity: Total Sample

Item	Corrected Item-Total Correlation	Alpha if Item Deleted
1. I actively think about what I have been learning in my (Spanish, French, Italian) class:	.558	.670
2. If (Spanish, French, Italian) were not taught in school, I would:	.425	.699
3. When I have a problem understanding something we are learning in (Spanish, French, Italian) class, I :	.459	.689
4. When it comes to (Spanish, French, Italian) homework,	.390	.702
5. Considering how I study (Spanish, French, Italian), I can honestly say that I:	.516	.679
6. If my professor wanted someone to do an extra (Spanish, French, Italian) assignment, I would:	.334	.711
7. After I get my (Spanish, French, Italian) assignment back, I:	.228	.724
8. When I am in (Spanish, French, Italian) class, I:	.349	.708
10. When I hear a (Spanish, French, Italian) song on the radio, I :	.366	.709

Desire to learn the language. A Cronbach's alpha of .7 to .8 indicates a scale has "good" reliability (Field, 2005). The Cronbach's alpha for the total sample of the *Desire to Learn the Language* sub-scale was .863. Corrected item-total correlations should usually be greater than .30 (Garson, 2007). The *Desire to Learn the Language* sub-scale had one corrected item-total correlation, item 19, below .40, but alpha would not increase if it were deleted (Baillie, 1997). This sub-scale had good reliability. Corrected item-total correlations for the total *Desire to Learn the Language* sub-scale for English-speaking college students learning a romance language are shown in Table 4-9

Table 4-9

Corrected Item-total Correlations for Desire to Learn the Language: Total Sample

Item	Corrected Item-Total Correlation	Alpha if Item Deleted
11. During (Spanish, French, Italian) class, I would like:	.506	.855
12. If I had the opportunity to speak (Spanish, French, Italian) outside of school, I would:	.612	.847
13. Compared to my other courses, I like (Spanish, French, Italian):	.624	.846
14. If there were a (Spanish, French, Italian) club in my school, I would:	.530	.854
15. If it were up to me whether or not to take (Spanish, French, Italian), I	.702	.838
16. I find studying (Spanish, French, Italian):	.678	.841
17. If the opportunity arose and I knew enough (Spanish, French, Italian), I would watch (Spanish, French, Italian) TV programs:	.567	.850
18. If I had the opportunity to see a (Spanish, French, Italian) play, I would:	.527	.855
19. If there were (Spanish, French, Italian) speaking families in my neighborhood, I would:	.396	.863
20. If I had the opportunity and knew enough (Spanish, French, Italian), I would read (Spanish, French, Italian) magazines and newspaper:	.615	.846

Attitudes towards learning the language. A Cronbach's alpha of .7 to .8 indicates a scale has "good" reliability (Field, 2005). The Cronbach's alpha for the total sample of the *Attitudes Towards Learning the Language* sub-scale was .946. Corrected item-total correlations should usually be greater than .30 (Garson, 2007). The *Attitudes Towards Learning the Language* sub-scale had no corrected item-total correlations below .40 (Baillie, 1997). This sub-scale had very good reliability, with total correlation scores ranging from .660 to .882. Corrected item-total correlations for the total *Attitudes Toward Learning the Language* for English-speaking college students learning a romance language are shown in Table 4-10.

Table 4-10

Corrected Item-total Correlations for Attitudes Toward Learning the Language: Total Sample

Item	Corrected Item-Total Correlation	Alpha if Item Deleted
21. Learning (Spanish, French, Italian) is really great.	.836	.938
22. I really enjoy learning (Spanish, French, Italian)	.874	.936
23. (Spanish, French, Italian) is an important part of the school	.660	.946
24. I plan to learn as much (Spanish, French, Italian) as possible	.829	.938
25. I love learning (Spanish, French, Italian)	.882	.935
26. I hate (Spanish, French, Italian)	.815	.939
27. I would rather spend my time on subjects other than (Spanish,	.677	.946
28. Learning (Spanish, French, Italian) is a waste of time	.725	.943
29. I think that learning (Spanish, French, Italian) is dull	.749	.942
30. When I leave school, I shall give up the study of (Spanish, French, Italian) entirely because I am not interested in it.	.759	.942

Validity of the Motivation Construct

Total sample. For the total sample eigenvalues, (which shows how evenly the variances are distributed indicating the importance of a factor, creating a determinant threshold) indicated two factors, explaining 40.1% of the total variance, and the scree plot, (the graph on which eigen values are plotted against) indicated three to four factors (Fields, 2005, p. 198, 632). Item factor loadings ranged from -.635 to. 819. Sub-scale names were assigned to these factors by the researcher based on the most common characteristic shared by the items. Factor one was named *Feeling and Attitude Towards the Language* because the items pertained to attitudes and emotions while learning the language. Ten of the *Attitudes Towards Learning the Language* items (21 to 30) loaded onto this factor. Factor two was named *Initiatives Taken to Learn the Language.* Of the six items (9, 10, 14, 17, 18, and 20) that loaded onto factor two, four items (14, 17, 18, and 20) pertained to desires and self-motivated acts towards learning the target language. Factor three was named *Intrinsic-Motivating Actions Towards Learning the Language.* All of the items (one, three, four, and five) that loaded onto Factor three were from the *Motivational Intensity* sub-scale. Factor four was named *Opportunity taken to learn the language*, which included four items (eight, eleven, twelve, and nineteen) within which three pertained to desires and self-motivating actions taken to learn the target language. The fifth and final factor, which included items (six and seven) pertaining to "going the extra-mile," was named *Initiatives Taken to Excel in the Target Language.* The *Motivational* sub-scale factor loadings for English-speaking college students learning a romance language are shown in Table 4-11.

Table 4-11

Factor Item Loadings for the Motivational Construct: Total Sample (N =227)

	Component				
	1	2	3	4	5
Item	**Feeling and Attitude towards the language**	**Initiatives taken to Learn the Language**	**Intrinsic-Motivating actions towards learning the language**	**Opportunities taken to learn the language**	**Initiatives taken to Excel in the target language**
1. I actively think about what I have been learning in my (Spanish, French, Italian) class:			.606		
2. If (Spanish, French, Italian) were not taught in school, I would:	.404				
3. When I have a problem understanding something we are learning in (Spanish, French, Italian) class, I :			.548		
4. When it comes to (Spanish, French, Italian) homework, I:			.502		
5. Considering how I study (Spanish, French, Italian), I can honestly say that I:			.642		
6. If my professor wanted someone to do an extra (Spanish, French, Italian) assignment, I would:					.636
7. After I get my (Spanish, French, Italian) assignment back, I:					.708
8. When I am in (Spanish, French, Italian) class, I:				.573	
9. If there were a local (Spanish, French, Italian) T.V. station I would:		-.635			

Continued

Table 4-11 (Continued)

Item	Component 1: Feeling and Attitude towards the language	2: Initiatives taken to Learn the Language	3: Intrinsic-Motivating actions towards learning the language	4: Opportunities taken to learn the language	5: Initiatives taken to Excel in the target language
10. When I hear a (Spanish, French, Italian) song on the radio, I :		.610			
11. During (Spanish, French, Italian) class, I would like:				.433	
12. If I had the opportunity to speak (Spanish, French, Italian) outside of school, I would:				.472	
13. Compared to my other courses, I like (Spanish, French, Italian):	.571				
14. If there were a (Spanish, French, Italian) club in my school, I would:		.363			
15. If it were up to me whether or not to take (Spanish, French, Italian), I would:	.649				
16. I find studying (Spanish, French, Italian):	.547				
17. If the opportunity arose and I knew enough (Spanish, French, Italian), I would watch (Spanish, French, Italian) TV programs:		.654			
18. If I had the opportunity to see a (Spanish, French, Italian) play, I would:		.628			
19. If there were (Spanish, French, Italian) speaking families in my neighborhood, I would:				.743	

Continued

Table 4-11 (Continued)

Item	Component 1: Feeling and Attitude towards the language	Component 2: Initiatives taken to Learn the Language	Component 3: Intrinsic-Motivating actions towards learning the language	Component 4: Opportunities taken to learn the language	Component 5: Initiatives taken to Excel in the target language
20. If I had the opportunity and knew enough (Spanish, French, Italian), I would read (Spanish, French, Italian) magazines and newspaper:		.696			
21. Learning (Spanish, French, Italian) is really great.	.819				
22. I really enjoy learning (Spanish, French, Italian).	.811				
23. (Spanish, French, Italian) is an important part of the school program.	.644				
24. I plan to learn as much (Spanish, French, Italian) as possible.	.766				
25. I love learning (Spanish, French, Italian).	.812				
26. I hate (Spanish, French, Italian).	.805				
27. I would rather spend my time on subjects other than (Spanish, French, Italian).	.701				
28. Learning (Spanish, French, Italian) is a waste of time.	.772				
29. I think that learning (Spanish, French, Italian) is dull.	.748				
30. When I leave school, I shall give up the study of (Spanish, French, Italian) entirely because I am not interested in it.	.736				

Reliability and Validity of the Strategy Inventory for Language Learning

Reliability of the SILL

Cronbach's alpha was calculated for the total *Strategy Inventory for Language Learning (SILL)* and for each of the six subscales (*Memory, Cognitive, Compensation, Metacognitive, Affective, and Social learning strategies*) by total sample, by gender, and by language. The *SILL scale* had calculated Cronbach's alphas of .93 for the total sample. Male respondents (α= .94) had slightly higher Cronbach's alpha scores than female respondents (α= .93). A Cronbach's alpha of .7 to .8 indicates a scale has "good" reliability (Field, 2005). A summary of Cronbach's alphas for the total *SILL* and *the* subscales is shown in Table 4-12.

Table 4-12

Summarized Results of Reliability Analyses for the Total SILL by Total Sample, Gender, and Language

	Cronbach's Alpha					
Scale	**Male**	**Female**	**Spanish**	**French**	**Italian**	**Total Sample**
	n= 79	n= 170	n= 96	n= 82	n= 68	n= 246
Memory Strategies	.794	.683	.745	.759	.670	.734
	n= 79	n= 169	n= 98	n= 82	n= 69	n= 249
Cognitive Strategies	.859	.819	.847	.802	.811	.830
	n= 78	n= 169	n= 97	n= 83	n= 68	n= 248
Compensation Strategies	.707	.586	.648	.590	.635	.627
	n= 80	n= 170	n= 99	n= 82	n= 70	n= 251
Metacognitive Strategies	.888	.882	.902	.855	.876	.885
	n= 80	n= 167	n= 98	n= 82	n= 68	n= 248
Affective Strategies	.543	.589	.556	.599	.586	.576
	n= 80	n= 169	n= 99	n= 81	n= 70	n= 250
Social Strategies	.816	.774	.813	.777	.770	.795
	n= 76	n= 159	n= 93	n= 79	n= 64	n= 236
Total SILL	.944	.928	.945	.925	.918	.934

Reliability of the total SILL. Cronbach's alphas were calculated for the total *Strategy Inventory for Language Learning (SILL).* Cronbach's alpha of .7 to .8 indicates a scale has "good" reliability (Field, 2005). Fourteen of the 50 corrected-item total correlations were below .40, and corrected item-total correlations should usually be greater than .30 (Garson, 2007). If item number 26, "I make up new words if I do not know the right one in (Spanish, French, Italian)" were deleted it would cause the Cronbach's alpha to increase from .934 to .936. Corrected item-total correlations for the total *SILL* are summarized in Table 4-13.

Table 4-13

Corrected Item-Total Correlations for the Total SILL: Total Sample

Subscale/Item		Corrected Item-Total Correlation	Alpha if Item Deleted
Memory			
1.	I think of relationships between what I already know and new things I learn in (Spanish, French, Italian).	.541	.933
2.	I use new (Spanish, French, Italian) words in a sentence so I can remember them.	.634	.932
3.	I connect the sound of a new (Spanish, French, Italian) word and an image or picture of the word to help me remember the word.	.402	.934
4.	I remember a new (Spanish, French, Italian) word by making a mental picture of a situation in which the word might be used.	.372	.934
5.	I use rhymes to remember new (Spanish, French, Italian) words.	.265	.935
6.	I use flashcards to remember new (Spanish, French, Italian) words.	.205	.936
7.	I physically act out new (Spanish, French, Italian) words.	.354	.934
8.	I review (Spanish, French, Italian) lessons often.	.517	.933
9.	I remember new (Spanish, French, Italian) words or phrases by remembering their location on the page, on the board, or on a street sign.	.367	.934
Cognitive			
10.	I say or write (Spanish, French, Italian) words several times.	.478	.933
11.	I try to talk like native (Spanish, French, Italian) speakers.	.474	.933
12.	I practice the sounds of (Spanish, French, Italian).	.595	.932
13.	I use the (Spanish, French, Italian) words I know in different ways.	.653	.932
14.	I start conversations in (Spanish, French, Italian).	.554	.933
15.	I watch (Spanish, French, Italian) language TV shows spoken in (Spanish, French, Italian) or go to movies spoken in (Spanish, French, Italian).	.469	.933
16.	I read for pleasure in (Spanish, French, Italian).	.428	.933
17.	I write notes, messages, letters or reports in (Spanish, French, Italian).	.457	.933
18.	I first skim a/an (Spanish, French, Italian) passage then go back and read carefully.	.492	.933
19.	I look for words in my own language that are similar to new words in (Spanish, French, Italian).	.488	.933
20.	I try to find patterns in (Spanish, French, Italian).	.457	.933
21.	I find the meaning of a/an (Spanish, French, Italian) word by	.393	.934

Subscale/Item	Corrected Item-Total Correlation	Alpha if Item Deleted
dividing it into parts that I understand.		
22. I try not to translate word for word.	.215	.935
23. I make summaries of information that I hear or read in (Spanish, French, Italian).	.441	.933
Compensation		
24. To understand unfamiliar (Spanish, French, Italian) words, I make guesses.	.271	.934
25. When I can't think of a word during a conversation in (Spanish, French, Italian), I use gestures.	.372	.934
26. I make up new words if I do not know the right ones in (Spanish, French, Italian).	.111	.936
27. I read (Spanish, French, Italian) without looking up every new word.	.298	.934
28. I try to guess what the other person will say next in (Spanish, French, Italian)	.320	.934
29. If I can't think of a/an (Spanish, French, Italian) word, I use a word or phrase that means the same thing.	.510	.933
Metacognitive		
30. I try to find as many ways as I can to use my (Spanish, French, Italian).	.647	.932
31. I notice my (Spanish, French, Italian) mistakes and use that information to help me do better.	.562	.933
32. I pay attention when someone is speaking (Spanish, French, Italian).	.615	.932
33. I try to find out how to be a better learner of (Spanish, French, Italian).	.663	.932
34. I plan my schedule, so I will have enough time to study (Spanish, French, Italian).	.549	.933
35. I look for people I can talk to in (Spanish, French, Italian).	.616	.932
36. I look for opportunities to read as much as possible in (Spanish, French, Italian).	.551	.933
37. I have clear goals for improving my (Spanish, French, Italian) skills.	.663	.932
38. I think about my progress in learning (Spanish, French, Italian).	.613	.932
Affective		
39. I try to relax whenever I feel afraid of using (Spanish, French, Italian).	.541	.933
40. I encourage myself to speak (Spanish, French, Italian) even when I am afraid of making a mistake.	.577	.932
41. I give myself a reward or treat when I do well in (Spanish, French, Italian).	.472	.933
42. I notice if I am tense or nervous when I am studying or using (Spanish, French, Italian).	.113	.936
43. I write down my feelings in a language-learning diary.	.215	.935
44. I talk to someone else about how I feel when I am learning (Spanish, French, Italian).	.257	.935

Subscale/Item		Corrected Item-Total Correlation	Alpha if Item Deleted
Social			
45.	If I do not understand something in (Spanish, French, Italian), I ask the other person to slow down or say it again.	.458	.933
46.	I ask (Spanish, French, Italian) speakers to correct me when I talk.	.551	.932
47.	I practice (Spanish, French, Italian) with other students.	.571	.932
48.	I ask for help from (Spanish, French, Italian) speakers.	.542	.933
49.	I ask questions in (Spanish, French, Italian).	.611	.932
50.	I try to learn about the culture of (Spanish, French, Italian) speakers.	.505	.933

Reliability of the memory language learning strategies subscale. Cronbach's alphas were calculated for the total *Memory Language-Learning Strategies (LLS)*. Cronbach's alpha of .7 to .8 indicates a scale has "good" reliability (Field, 2005). The Cronbach's alpha score for the total *Memory LLS* was .734. Four of the nine corrected-item total correlations were below .40, and corrected item-total correlations should usually be greater than .30 (Garson, 2007). The item number six "I use flashcards to remember new (Spanish, French, Italian) words" when deleted increased the alpha from .734 to .748. Corrected item-total correlations for the *Memory LLS* subscale is summarized in Table 4-14.

Table 4-14

Corrected Item-Total Correlations for the Memory Language-Learning Strategies Subscale

Item	Corrected Item-Total Correlation	Alpha if Item Deleted
1. I think of relationships between what I already know and new things I learn in (Spanish, French, Italian)	.399	.713
2. In use new (Spanish, French, Italian) words in a sentence so I can remember them	.563	.686
3. I connect the sound of a new (Spanish, French, Italian) word and an image or picture of the word to help me remember the word	.506	.694
4. I remember a new (Spanish, French, Italian) word by making a mental picture of a situation in which the word might be used	.474	.699
5. I use rhymes to remember new (Spanish, French, Italian) words	.426	.708
6. I use flashcards to remember new (Spanish, French, Italian) words	.246	.748
7. I physically act out new (Spanish, French, Italian) words	.317	.725
8. I review (Spanish, French, Italian) lessons often	.469	.702
9. I remember new (Spanish, French, Italian) words or phrases by remembering their location on the page, on the board, or on a street sign.	.369	.719

Reliability of cognitive language learning strategies subscale. Cronbach's alphas were calculated for the total *Cognitive Language-Learning Strategies (LLS)*. Cronbach's alpha of .7 to .8 indicates a scale has "good" reliability (Field, 2005). The Cronbach's alpha score for the total *Cognitive LLS* was .830. Two of the fourteen corrected-item total correlations were below .40, and corrected item-total correlations should usually be greater than .30 (Garson, 2007). Item number 22 "I try not to translate word for word" if deleted would increase alpha from .830 to .837. Corrected item-total correlations for the *Cognitive LLS* subscale are summarized in Table 4-15.

Table 4-15

Corrected Item-Total Correlations for the Cognitive Language-Learning Strategies Subscale

Item	Corrected Item-Total Correlation	Alpha if Item Deleted
10. I say or write (Spanish, French, Italian) words several times.	.394	.825
11. I try to talk like native (Spanish, French, Italian) speakers.	.495	.818
12. I practice the sounds of (Spanish, French, and Italian).	.621	.808
13. I use the (Spanish, French, Italian) words I know in different ways.	.638	.809
14. I start conversations in (Spanish, French, and Italian).	.543	.815
15. I watch (Spanish, French, Italian) language TV shows spoken in (Spanish, French, Italian) or go to movies spoken in (Spanish, French, Italian).	.517	.816
16. I read for pleasure in (Spanish, French, Italian).	.480	.819
17. I write notes, messages, letters or reports in (Spanish, French, Italian).	.476	.819
18. I first skim an (Spanish, French, Italian) passage then go back and read carefully.	.415	.823
19. I look for words in my own language that are similar to new words in (Spanish, French, Italian).	.449	.821
20. I try to find patterns in (Spanish, French, and Italian).	.460	.820
21. I find the meaning of an (Spanish, French, Italian) word by dividing it into parts that I understand.	.413	.824
22. I try not to translate word for word.	.201	.837
23. I make summaries of information that I hear or read in (Spanish, French, and Italian).	.413	.823

Reliability of compensation language-learning strategies subscale. The Cronbach's alphas total for the *Compensation Language-Learning Strategies (LLS)* subscale was .627. Cronbach's alpha of .7 to .8 indicates a scale has "good" reliability (Field, 2005). There were four items of the six corrected-item total correlations below .40, and corrected item-total correlations should usually be greater than .30 (Garson, 2007). There were no items which, if deleted, would cause the Cronbach's alpha to

increase. Corrected item-total correlations for the *Compensation LLS* subscale is summarized in Table 4-16.

Table 4-16

Corrected Item-Total Correlations for the Compensation Language-Learning Strategies

Item	Corrected Item-Total Correlation	Alpha if Item Deleted
24. To understand unfamiliar (Spanish, French, Italian) words, I make guesses.	.287	.609
25. When I can't think of a word during a conversation in (Spanish, French, Italian), I use gestures.	.428	.554
26. I make up new words if I do not know the right ones in (Spanish, French, Italian).	.321	.602
27. I read (Spanish, French, Italian) without looking up every new word.	.370	.579
28. I try to guess what the other person will say next in (Spanish, French, Italian)	.346	.589
29. If I can't think of an (Spanish, French, Italian) word, I use a word or phrase that means the same thing.	.409	.567

Reliability of metacognitive language-learning strategies subscale. The calculated Cronbach's alpha total for the *Metacognitive Language-Learning Strategies (LLS)* subscale was .885. Cronbach's alpha of .7 to .8 indicates a scale has "good" reliability (Field, 2005). There were no items with corrected-item total correlations below .40; corrected item-total correlations should usually be greater than .30 (Garson, 2007). No items would cause the alpha to increase if they were to be deleted. Corrected item-total correlations for the *Metacognitive LLS* subscale are summarized in Table 4-17.

Table 4-17

Corrected Item-Total Correlations for the Metacognitive Language-Learning Strategies

Item	Corrected Item-Total Correlation	Alpha if Item Deleted
30. I try to find as many ways as I can to use my (Spanish, French, Italian).	.664	.870
31. I notice my (Spanish, French, Italian) mistakes and use that information to help me do better.	.524	.881
32. I pay attention when someone is speaking (Spanish, French, Italian).	.607	.875
33. I try to find out how to be a better learner of (Spanish, French, Italian).	.691	.868
34. I plan my schedule so I will have enough time to study (Spanish, French, Italian).	.599	.875
35. I look for people I can talk to in (Spanish, French, Italian).	.642	.872
36. I look for opportunities to read as much as possible in (Spanish, French, Italian).	.592	.876
37. I have clear goals for improving my (Spanish, French, Italian) skills.	.700	.866
38. I think about my progress in learning (Spanish, French, Italian).	.690	.867

Reliability of affective language-learning strategies subscale. The calculated Cronbach's alpha total for the *Affective Language-Learning Strategies (LLS)* subscale was .576. As previously stated, Cronbach's alpha of .7 to .8 indicates a scale has "good" reliability (Field, 2005). The total Cronbach's alpha indicates this subscale has poor reliability. Five of the six corrected-item total correlations were below .40, and corrected item-total correlations should usually be greater than .30 (Garson, 2007). None of the items would cause the alpha to increase if they were deleted. Corrected item-total correlations for the *Affective LLS* subscale are summarized in Table 4-18.

Table 4-18

Corrected Item-Total Correlations for Affective Language-Learning Strategies

Item	Corrected Item-Total Correlation	Alpha if Item Deleted
39. I try to relax whenever I feel afraid of using (Spanish, French, and Italian).	.337	.521
40. I encourage myself to speak (Spanish, French, Italian) even when I am afraid of making a mistake.	.229	.570
41. I give myself a reward or treat when I do well in (Spanish, French, and Italian).	.542	.425
42. I notice if I am tense or nervous when I am studying or using (Spanish, French, and Italian).	.221	.577
43. I write down my feelings in a language-learning diary.	.299	.546
44. I talk to someone else about how I feel when I am learning (Spanish, French, and Italian).	.318	.531

Reliability of the social language-learning strategies. The calculated Cronbach's alpha total for the *Social Language-Learning Strategies (LLS)* subscale was .795. Cronbach's alpha of .7 to .8 indicates a scale has "good" reliability (Field, 2005). None of the six corrected-item total correlations was below .40, and corrected item-total

correlations should usually be greater than .30 (Garson, 2007). Corrected item-total correlations for the *Social LLS* subscale is summarized in Table 4-19.

Table 4-19

Corrected Item-Total Correlations for the Social Language-Learning Strategies

Item	Corrected Item-Total Correlation	Alpha if Item Deleted
45. If I do not understand something in (Spanish, French, Italian), I ask the other person to slow down or say it again.	.406	.793
46. I ask (Spanish, French, Italian) speakers to correct me when I talk.	.649	.737
47. I practice (Spanish, French, and Italian) with other students.	.518	.770
48. I ask for help from (Spanish, French, Italian) speakers.	.665	.733
49. I ask questions in (Spanish, French, and Italian).	.605	.751
50. I try to learn about the culture of (Spanish, French, Italian) speakers.	.447	.786

Exploratory Factor Analysis for the SILL

Principal components analysis using varimax rotation was conducted for the total sample of English-speaking college students to test the unidimensionality of the *SILL*. The number of factors actually extracted was determined by the number of items with eigenvalues greater than 1. Factor loadings less than .3 were suppressed to make interpretation easier. The lower threshold was used to ensure every item loaded onto a factor. Initial output was reviewed for singularity and multicollinearity of data. There were no highly correlated items ($r > .9$), and the determinant of the correlation matrix was greater than .9. For the total sample, the determinant of the correlation matrix was greater than .001, which is well above the recommended value of .00001 (Field, 2005).

For the total sample eigenvalues indicated 13 factors, explaining 64.6% of the total variance, and the scree plot indicated five to six factors. Item factor loadings ranged from -.310 to .853. Sub-scale names were assigned to these factors by the researcher based on the most common characteristics. Factor one was named *Techniques of Language-Learning* because the items pertained to the planning, organization, and skills applied towards learning the language. Seven of the items (10, 34, 35, 37, 38, 39, and 40) loaded onto this factor. Factor two was named *Social Methods of Self-assessment.* Of the seven items (30, 31, 45, 46, 47, 48, and 49) that loaded onto factor two, five items (45, 46, 47, 48, and 49) pertained to *Social Language-Learning Strategies*. Factor three was named *Association Language-Learning Approach*. Four items (1, 19, 20, and 21) loaded onto Factor three and three of the items (19, 20, and 21) were within *Cognitive Language-Learning Strategy sub-scale.* Factor four was named *Motivating Methods of Language Learning*, which included four items (15, 16, 17 and 36) that pertained to self-motivating actions taken to learn the target language. The fifth factor, included items (2, 13, 14, 23, 32, and 33) pertaining to plans and approaches used to learn the target language and was named *Language-Learning Initiatives. The* sixth factor was named *Mental Memo Strategies.* The strategies in this category included items (three and four) pertaining to the mental images language-learners use to remember words in the target language. The seventh factor was named *Emulating Language-Learning Tactics*. The items (11, 12, 18, and 50) in this factor pertained to mimicking tactics language learners use to obtain near native fluency and learn the culture. The eighth factor was named *Studying-Memory Skill* and had items (5, 6, and 42) that pertained to remembering words in the target language and study habits. The ninth factor was named *Emotional Tactics*

because it contained items (8, 41, 43, and 44) relating to methods language learners use to assess their emotions. Factor ten was labeled *Innovative Word Study* because it contained items (seven, nine, and twenty-five) pertaining to different methods of learning new vocabulary in the target language. Factor eleven had two items (22, and 27) and was labeled *Creative Learning Strategies* because it pertained to "guessing" word meaning in the target language. Factor twelve had one item (28) that pertained to guessing what others will say in the target language and was labeled *Presumption Strategies*. Factor thirteen was named *Word Creation and Study* because the items (24, 26, and 29) pertained to word creation and guessing methods to learning and remembering new words in the target language. A summary of the 13 components and the new factors names assigned to each is shown in Table 4-20.

Table 4-20

Summary of SILL New Factor Names by Component

Component	New Factor Name
1	Techniques of Language Learning
2	Social Methods of Self-Assessment
3	Association Language Learning Approach
4	Motivating Methods
5	Language-Learning Initiatives
6	Mental Memo Strategies
7	Emulating Language-Learning Tactics
8	Studying Memory Skills
9	Emotional Tactics
10	Innovative Word Study
11	Creative Learning Strategies
12	Presumption Strategies
13	Word Creation and Study

Factor loadings for each of the 50 items of the *SILL* are shown in Table 4-21.

Table 4-21

Factor Item Loadings for the SILL: Total Sample

	Component												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Item													
MEM_1			.559										
MEM_2					.587								
MEM_3						.821							
MEM_4						.796							
MEM_5								.458					
MEM_6								.797					
MEM_7										.374			
MEM_8									.395				
MEM_9										.603			
COG_10	.409												
COG_11							.579						
COG_12							.535						
COG_13					.634								
COG_14					.541								
COG_15				.757									
COG_16				.853									
COG_17				.691									
COG_18							.359						
COG_19			.716										
COG_20			.791										
COG_21			.728										
COG_22											.727		
COG_23					.414								
COM_24													.768
COM_25										.519			
COM_26													.323
COM_27											.743		
COM_28												.782	
COM_29													.394
MET_30		.437											
MET_31		.354											
MET_32					.336								
MET_33					.420								
MET_34	.660												
MET_35		.463											
MET_36				.583									
MET_37	.678												
MET_38	.757												
AFF_39	.646												
AFF_40	.507												
AFF_41									.456				
AFF_42								.581					
AFF_43									.727				
AFF_44									.644				
SOC_45		.545											
SOC_46		.727											
SOC_47		.537											
SOC_48		.713											
SOC_49		.579											
SOC_50							.610						

Research Questions

Research Question 1: Demographic Characteristics, Language Learning Experiences, Motivation, Language Learning Strategies Used, and Expected Course Grade of English Speaking College Students Who are Second Language Learners

What are the demographic characteristics, language-learning experience, motivation, language learning strategies used (memory, cognitive, compensation, metacognitive, affective, and social strategies), and expected course grade of English-speaking college students who are second-language learners?

Demographic Characteristics

The number of valid responses for each of the six demographic characteristics (gender, age, grade level, major, race and ethnicity) ranged from 223 to 255. The results were segregated according to gender and the three romance languages. The data-producing sample was comprised of 255 English-speaking college students. There were 82 males (32.3%) and 172 females (67.7%). The average age of the total sample was 21.84 years old. The average age of male participants was 22.45 years old, while the average age of female participants was 21.56 years old. Respondents were fairly evenly distributed in terms of grade level. The majority of students had majors in the humanities, social science, education, and human development areas (79.2%). The majority of respondents were white (83.5%), and non-Hispanic or Latino (95.1%). Demographic characteristics by gender and total sample are shown in Table 4-22.

Table 4-22

Demographic Characteristics: Total Sample and by Gender

Demographic Variables	Male		Female		Total Sample	
	Frequency	Valid Percent	Frequency	Valid Percent	Frequency	Valid Percent
Age	n=81		n=169		n=251	
18	7	8.5%	16	9.5%	23	9.2%
19	11	13.4%	39	23.1%	50	19.9%
20	17	21.0%	39	23.1%	57	22.7%
21	14	17.3%	36	21.3%	50	19.9%
22	11	13.6%	14	8.3%	25	10.0%
23 and over	21	25.9%	25	14.8%	46	18.3%
College Grade Level	n=81		n=171		n=253	
Freshman	16	19.8%	29	17.0%	45	17.8
Sophomore	13	16.0%	52	30.4%	65	25.7
Junior	25	30.9%	59	34.5%	84	33.2
Senior	27	33.3%	31	18.1%	59	23.3
College Major	n= 82		n= 172		n=255	
Undecided	6	7.3%	8	4.7%	14	5.5
Humanities & Social Science	62	75.6%	139	80.8%	202	79.2
Health & Human Services	1	1.2%	5	2.9%	6	2.4
Volgenau school IT, Engineering & College of Science	4	4.9%	6	3.5%	10	3.9
School of Management	6	7.3%	4	2.3%	10	3.9
College of Art & Visual Tech	3	3.7%	10	5.8%	13	5.1
Race	n=81		n=167		n=248	
White	71	87.7%	136	81.4%	207	83.3
Black or African American	3	3.7%	18	10.8%	21	8.5
Asian	5	6.2%	4	2.4%	9	3.6
American Indian or Alaska Native	0	0	1	.6%	1	.4
Native Hawaiian or other Pacific Islander	0	0	4	2.4%	4	1.6
Other	2	2.5%	4	2.4%	6	2.4
Ethnicity	n=65		n=158		n=223	
Hispanic or Latino	5	7.7%	6	3.8%	11	4.9
Non Hispanic or Latino	60	92.3%	152	96.2%	212	95.1

Language-Learning Experience

Students were asked to self-report on their language-learning experience by filling in the blank in response to questions about the following: 1) their primary language; 2) the number of years spent studying a language; and 3) the number of languages spoken by the student. The number of total responses was 256. Most respondents (94.9%) chose English as their primary language, and these students were the ones included in analyses related to the research questions and hypotheses. Most students reported speaking only one language (60.5%).

The years spent studying a language was categorized into the following five groups: 1) 0 to 1 year; 2) 1.5 to 2.5 years; 3) 3 to 4 years; 4) 4.5 to 5.5 years; and 5) 6 years and over. Most respondents (27.9%) fell into the 0 to 1 year category. The average number of years respondents spent studying a language was 2.75 years. The language-learning experience by gender for the total sample is displayed in the Table 4-23.

Table 4-23

Language-Learning Experience: Total Sample and by Gender

Demographic Variables	Male		Female		Total Sample	
	Frequency	Valid Percent	Frequency	Valid Percent	Frequency	Valid Percent
Primary Language	n=82		n=172		n=256	
English	78	95.1%	163	94.8%	243	94.9%
Other	4	4.9%	9	5.2%	13	5.1%
Number of Languages Spoken	n=79		n=167		n=248	
1 language	48	60.8%	101	60.5%	150	60.5%
2 languages	20	25.3%	49	29.3%	70	28.2%
3 languages	11	13.9%	14	8.4%	25	10.1%
4 languages	0	0.0%	2	1.2%	2	0.8%
5 languages	0	0.0%	1	0.6%	1	0.4%
Years Studying the Language	n=82		n=168		n=251	
0 to 1	23	28%	47	28.0%	70	27.9%
1.5 to 2.5	18	22%	25	14.9%	43	17.1%
3 to 4	23	28%	36	21.4%	59	23.5%
4.5 to 5.5	9	11%	29	17.3%	39	15.5%
6 or more	9	11%	31	18.5%	40	15.9%

Motivation

Motivation was measured using the *Motivation* construct from Gardner's *Attitude/Motivation Test Battery* (AMTB) (1985). The *Motivation* construct is comprised of three subscales and 30 items. The response format for two of the scales, *Motivational Intensity* (*MI*) and *Desire to Learn the Language (DLL)*, is a three-point degree of rating scale with total possible scores ranging from 10 to 30. The response format for *Attitudes Toward Learning the Language* (*ALL*) is a seven-point Likert-type scale, with the first five questions positively worded and the last five negatively worded. Possible total scale scores for the *ALL* range from 10 to 70. For the total *Motivation* construct, possible scores range from 30 to 130, where low scores are associated with low motivation toward

learning a second language and higher scores are associated with higher motivation toward learning a second language. Results were analyzed for the total sample and by gender.

Total motivation. Among the total sample, total *Motivation* scores ranged from 38 to 127, with a mean score of 99.21 (*SD* = 19.40). However, the mean score may have been affected by an error in the response choices for item 9. The data-producing male sample for the *Motivation* construct (*n* = 73) produced scores that ranged from 38 to 126. The mean score of male respondents on the *Motivation* construct was 93.18 (*SD* = 21.14). The total female sample for the *Motivation* construct (*n* = 153) produced scores that ranged from 38 to 127. The mean score of female respondents on the *Motivation* construct was 102.21 (*SD* = 17.87).

Motivational intensity. Among the total sample, the total *Motivational Intensity* score ranged from 14 to 29, and the mean score was 22.65 (SD 3.31). The *Motivation Intensity* scores of male respondents ranged from 14 to 27, with a mean score of 21.65 (SD 3.24). The scores of female respondents ranged from 15 to 29 with a mean score of 23.14 (SD 3.25).

Desire to learn the language. Among the total sample, the total *Desire to Learn the Language* score ranged from 10 to 30 with a mean score of 22.52 (*SD* = 4.30). The *Desire to Learn the Language* score of male respondents ranged from 10 to 30 with a mean score of 21.05 (*SD* = 4.35). The score of female respondents ranged from 11 to 30 with a mean score of 23.22 (*SD* = 4.10).

Attitudes toward learning the language. For the *Attitudes Towards Learning the Language* sub-scale the scores of respondents ranged from 10 to 70 with a mean score of 54.65 (*SD* = 13.56). The scores of male respondents ranged from 14 to 70 with a mean

score of 51.19 (*SD* = 14.60). For female participants, scores ranged from 10 to 70 with a mean score of 56.37 (*SD* = 12.75). The response distribution for *Attitudes Toward Learning the Language* for the total sample is shown in Table 4-24.

Table 4-24

Attitudes Toward Learning the Language

Item	Response Categories Percent Distribution							Mean
	Strongly Disagree	**Moderately Disagree**	**Slightly Disagree**	**Neutral**	**Slightly Agree**	**Moderately Agree**	**Strongly Agree**	
1. Learning (Spanish, French, Italian) is really great.	2.0%	2.4%	3.1%	8.7%	17.7%	26.4%	39.8%	5.76
2. I really enjoy learning (Spanish, French, Italian)	3.9%	2.8%	4.7%	6.3%	21.2%	25.6%	35.4%	5.57
3. (Spanish, French, Italian) is an important part of. the school program	3.5%	5.5%	5.5%	14.2%	22.0%	25.6%	23.0%	5.17
4. I plan to learn as much (Spanish, French, Italian) as possible	3.9%	5.1%	7.9%	7.5%	17.3%	24.0%	34.3%	5.38
5. I love learning (Spanish, French, Italian)	4.7%	3.9%	7.5%	9.8%	19.7%	21.7%	32.7%	5.32
6. I hate (Spanish, French, Italian)	3.2%	2.0%	4.3%	8.7%	5.5%	16.6%	59.7%	6.00
7. I would rather spend my time on subjects other than (Spanish, French, Italian)	11.4%	13.0%	15.0%	18.5%	13.4%	16.1%	12.6%	4.08
8. Learning (Spanish, French, Italian) is a waste of Time	2.0%	1.2%	3.5%	4.7%	8.3%	13.0%	67.3%	6.24
9. I think that learning (Spanish, French, Italian) is Dull	2.8%	2.4%	7.1%	8.7%	9.8%	16.9%	52.4%	5.81
10. When I leave school, I shall give up the study of (Spanish, French, Italian) entirely because I am not interested in it.	6.7%	4.3%	6.7%	12.2%	10.2%	18.5%	41.3%	5.36
Total Mean Score								**54.65**

Language- Learning Strategies

Language-learning strategies were measured using the *Strategy Inventory for Language Learning* (SILL), developed by Rebecca Oxford (1990). The 50-item positively worded SILL contains six sub-scales organized into direct (*Memory, Cognitive, and Compensation*) and indirect (*Metacognitive, Affective and Social*) language-learning strategies (Oxford, 1990). The response format for the SILL consists of a 5-point rating scale. Response categories are: 1= never or almost never true of me; 2= usually not true of me; 3= somewhat true of me; 4= usually true of me; and 5= always or almost always true of me. Total possible SILL scale scores range from 50 to 250. Higher scores indicate greater use of strategy inventory items, while lower scores indicated a less use of strategy inventory items (Oxford, 1990).

Among the total sample of English-speaking college students learning a romance language (N = 236), total actual *SILL* scores ranged from 54 to 228, with a mean score of 147.73 (*SD* = 28.60). *Direct Language-Learning Strategies* total scores ranged from 29 to 128 with a mean score of 85.97 (*SD* = 15.81). *Indirect* language-learning strategies total scores ranged from 25 to 101, with a mean score of 61.92 (*SD* = 14.45). Descriptive statistics for each of the six individual language-learning strategy types are presented below, with *Direct Language-Learning Strategies* resented first, followed by indirect strategies.

Direct language-learning strategies. Direct strategies consist of strategies students use to directly manipulate the information received for learning, retaining and recalling prior information. Direct strategies consist of *Memory, Cognitive,* and

Compensation strategies (Chamot & O'Malley, 1990; Oxford, 1990). The total possible scores for *Direct* ***Language-Learning Strategies*** range from 29 to 145 (Oxford, 1990).

Memory language-learning strategies. *Memory Language-Learning Strategies* are strategies that use imagery and help students store and retrieve new information (Oxford, 1990; Shmais, 2003). *Memory Language-Learning Strategies* are comprised of nine items with possible scores ranging from 9 to 45. Among the 246 respondents, the total *Memory strategies* score ranged from 9 to 41 with a mean score of 25.92 (*SD* = 6.07). The number of respondents consisted of 79 males and 166 females. The male respondents mean score was 23.77 (*SD* 6.18) and the females mean score was 26.96 (*SD* 5.76). The total response category for *Memory Language-Learning Strategies* is presented in Table 4-25.

Table 4-25

Total Memory Language-Learning Strategies

Item	Response Categories Percent Distribution					Mean
	Never or almost never true of me	Usually not true of me	Somewhat true of me	Usually true of me	Always or almost always true of me	
1. I think of relationships between what I already know and new things I learn in (Spanish, French, Italian)	5.6%	6.0%	32.4%	34.85	21.2%	3.60
2. I use new (Spanish, French, Italian) words in a sentence so I can remember them	8.0%	15.5%	30.7%	32.3%	13.5%	3.28
3. I connect the sound of a new (Spanish, French, Italian) word and an image or picture of the word to help me remember the word	8.7%	22.6%	29.4%	25.8%	13.5%	3.13
4. I remember a new (Spanish, French, Italian) word by making a mental picture of a situation in which the word might be used	11.1%	27.0%	28.2%	21.4%	12.3%	2.97
5. I use rhymes to remember new (Spanish, French, Italian) words	37.3%	32.1%	13.1%	11.1%	6.3%	2.17
6. I use flashcards to remember new (Spanish, French, Italian) words	28.2%	21.4%	12.7%	17.9%	19.8%	2.80
7. I physically act out new (Spanish, French, Italian) words	52.4%	26.0%	12.4%	6.4%	2.8%	1.81
8. I review (Spanish, French, Italian) lessons often	8.7%	15.9%	38.5%	29.0%	7.9%	3.12
9. I remember new (Spanish, French, Italian) words or phrases by remembering their location on the page, on the board, or on a street sign.	16.7%	17.5%	23.9%	24.7%	17.1%	3.08
Total Mean Score						**25.92**

Cognitive language-learning strategies. *Cognitive Language-Learning Strategies* are approaches used by the language-learner to enable the learner to understand and produce new language by many different means. This strategy is responsible for internal mental processes and the production of taking notes and messaging (Oxford, 1990; Chamot & O'Malley, 1990). *Cognitive strategies* are comprised of 14 items with possible scores ranging from 14 to 70. The total *Cognitive Language-Learning Strategies* score for the 249 participants ranged from 14 to 68 and had a mean score of 41.47 (*SD* = 9.23). The sample consisted of 79 males with a mean score of 39.38 (*SD* = 9.25) and 169 females with a mean score of 42.45 (*SD* = 9.11). The response category for *Cognitive Language-Learning Strategies* is displayed in table 4-26.

Table 4-26

Cognitive Language-Learning Strategies

Item	Response Categories Percent Distribution					Mean
	Never or almost never true of me	Usually not true of me	Somewhat true of me	Usually true of me	Always or almost always true of me	
10. I say or write (Spanish, French, Italian) words several times.	9.6%	13.5%	23.1%	28.7%	25.1%	3.46
11. I try to talk like native (Spanish, French, Italian) speakers.	13.5%	18.3%	23.1%	20.7%	24.3%	3.24
12. I practice the sounds of (Spanish, French, Italian).	9.6%	17.9%	26.7%	22.3%	23.5%	3.32
13. I use the (Spanish, French, Italian) words I know in different ways.	7.5%	17.1%	37.3%	29.4%	8.7%	3.15
14. I start conversations in (Spanish, French, Italian).	17.5%	34.5%	25.4%	17.9%	4.8%	2.58
15. I watch (Spanish, French, Italian) language TV shows spoken in (Spanish, French, Italian) or go to movies spoken in (Spanish, French, Italian).	31.0%	30.6%	23.0%	12.3%	3.2%	2.26
16. I read for pleasure in (Spanish, French, Italian).	50.2%	28.7%	13.5%	4.8%	2.8%	1.81
17. I write notes, messages, letters or reports in (Spanish, French, Italian).	35.5%	27.1%	26.7%	7.6%	3.2%	2.16
18 I first skim an (Spanish, French, Italian) passage then go back and read carefully.	7.5%	16.3%	29.0%	36.5%	10.7%	3.27
19. I look for words in my own language that are similar to new words in (Spanish, French, Italian).	7.5%	8.3%	19.0%	36.1%	29.0%	3.71
20. I try to find patterns in (Spanish, French, Italian).	6.3%	8.7%	17.9%	37.7%	29.4%	3.75
21. I find the meaning of an (Spanish, French, Italian) word by dividing it into parts that I understand.	14.7%	19.8%	23.8%	25.0%	16.7%	3.09
22. I try not to translate word for word.	16.3%	28.2%	29.0%	17.9%	8.7%	2.75
23. I make summaries of information that I hear or read in (Spanish, French, Italian).	14.7%	21.8%	30.2%	23.8%	9.5%	2.92
Total Mean Score						**41.47**

Compensation language-learning strategies. *Compensation* Language-Learning Strategies are strategies that allow learners to use the language despite their often-large gaps in knowledge (Oxford, 1990; Shmais, 2003). There are six items within *Compensation Language-Learning Strategies* with a possible score of 6 to 30. The total score for the 248 participants for *Compensation* scale ranged from 6 to 30 and had a mean score of 18.28 (*SD* = 4.05). The 248 participants consisted of 78 males with a mean score of 17.94 (*SD* = 4.27) and 169 females with a mean score of 18.41 (*SD* = 3.95). The response and mean scores by *Compensation Language-Learning Strategies* are represented in table 4-27.

Table 4-27

Compensation Language-Learning Strategies

Item	Response Categories Percent Distribution					Mean
	Never or almost never true of me	Usually not true of me	Somewh at true of me	Usually true of me	Always or almost always true of me	
24 To understand unfamiliar (Spanish, French, Italian) words, I make guesses.	5.6%	8.7%	34.5%	38.1%	13.1%	3.44
25. When I can't think of a word during a conversation in (Spanish, French, Italian), I use gestures.	10.8%	14.3%	23.5%	33.9%	17.5%	3.33
26. I make up new words if I do not know the right ones in (Spanish, French, Italian).	30.0%	23.6%	19.2%	20.0%	7.2%	2.51
27 I read (Spanish, French, Italian) without looking up every new word.	13.1%	16.3%	31.5%	27.1%	12.0%	3.08
28 I try to guess what the other person will say next in (Spanish, French, Italian).	26.6%	32.1%	26.2%	11.9%	3.2%	2.33
29 If I can't think of an (Spanish, French, Italian) word, I use a word or phrase that means the same thing.	3.6%	11.1%	25.4%	42.9%	17.1%	3.59
Total Mean Score						**18.28**

Indirect language-learning strategies. Indirect strategies are strategies that require mental and emotional awareness of what a student is doing during the *Cognitive* process to ensure the most production or outcome. Indirect strategies consist of *Metacognitive, Affective*, and *Social Language-Learning Strategies* (Oxford, 1990). Indirect strategies tend to stem from the *Metacognitive* aspect of learning and the *Social-Affective* aspect of language learning among social psychologist (Oxford, 1990). The possible scores for *Indirect Language-Learning Strategies* range from 21 to 105 (Oxford, 1990).

Metacognitive language-learning strategies. *Metacognitive Language-Learning Strategies* are strategies that allow learners to control their own cognition–that is, to coordinate the learning process by using functions such as centering, arranging, planning, and evaluating (Oxford, 1990; Chamot & O'Malley, 1990; Wenden 1999; Shmais, 2003). *Metacognitive Language-Learning Strategies* contain 9 items with possible scores ranging from 9 to 45. Among the 251 participants the total *Metacognitive Language-Learning Strategies* scores ranged from 9 to 45 with a mean score of 27.90 (*SD* = 7.44). Of the total sample for *Metacognitive Language-Learning Strategies*, 80 were males with a mean score of 26.55 (*SD* = 7.32) and 170 were females with a mean score of 28.57 (*SD* = 7.44). The responses for *Metacognitive Language-Learning Strategies* are displayed in Table 4-28.

Table 4-28

Metacognitive Language-Learning Strategies

Item		Response Categories Percent Distribution					Mean
		Never or almost never true of me	Usually not true of me	Somewh at true of me	Usually true of me	Always or almost always true of me	
30	I try to find as many ways as I can to use my (Spanish, French, Italian).	10.7%	26.6%	32.9%	19.4%	10.3%	2.92
31	I notice my (Spanish, French, Italian) mistakes and use that information to help me do better.	5.2%	12.7%	37.7%	29.0%	15.5%	3.37
32	I pay attention when someone is speaking (Spanish, French, Italian).	3.6%	4.8%	18.3%	37.8%	35.5%	3.97
33	I try to find out how to be a better learner of (Spanish, French, Italian).	6.0%	12.0%	30.3%	29.5%	22.3%	3.50
34	I plan my schedule so I will have enough time to study (Spanish, French, Italian).	14.3%	23.5%	36.3%	14.7%	11.2%	2.85
35	I look for people I can talk to in (Spanish, French, Italian).	20.7%	30.3%	24.3%	13.9%	10.8%	2.64
36	I look for opportunities to read as much as possible in (Spanish, French, Italian).	28.7%	35.1%	24.3%	6.8%	5.2%	2.25
37	I have clear goals for improving my (Spanish, French, Italian) skills.	13.9%	21.9%	29.9%	23.1%	11.2%	2.96
38	I think about my progress in learning (Spanish, French, Italian).	8.0%	12.7%	26.3%	30.7%	22.3%	3.47
Total Mean Score							**27.90**

Affective language-learning strategies. *Affective Language-Learning Strategies* are strategies that help to regulate emotions, motivations, and attitudes, within the second language learner (Oxford, 1990). *Affective strategies* contain 6 items with possible scores ranging from 6 to 30. Among the 248 participants the total *Affective Language-Learning Strategies* score ranged from 6 to 30 with a mean score of 14.73 (*SD* = 3.98). The respondents consisted of 80 males with a mean score of 14.41 (*SD* = 3.75) and 167 females with mean scores of 14.90 (*SD* = 4.08). The responses for *Affective Language-Learning Strategies* are displayed in the table 4-29.

Table 4-29

Affective Language-Learning Strategies

Item	Response Categories Percent Distribution					Mean
	Never or almost never true of me	Usually not true of me	Somewh at true of me	Usually true of me	Always or almost always true of me	
39 I try to relax whenever I feel afraid of using (Spanish, French, Italian).	10.8%	18.3%	34.3%	25.8%	10.8%	3.08
40 I encourage myself to speak (Spanish, French, Italian) even when I am afraid of making a mistake.	11.6%	17.6%	28.4%	26.4%	16.0%	3.18
41 I give myself a reward or treat when I do well in (Spanish, French, Italian).	44.6%	28.3%	13.1%	10.0%	4.0%	2.00
42 I notice if I am tense or nervous when I am studying or using (Spanish, French, Italian).	20%	18.0%	26.8%	21.6%	13.6%	2.91
43 I write down my feelings in a language-learning diary.	81.6%	12.4%	3.2%	.8%	2.0%	1.29
44 I talk to someone else about how I feel when I am learning (Spanish, French, Italian).	43.2%	16.0%	20.4%	12.4%	8.0%	2.26
Total Mean Score						**14.73**

Social Language-Learning Strategies. *Social Language-Learning Strategies* are strategies that help students learn through interaction with others (Oxford, 1990). This strategy contains six items and has a possible score of 6 to 30. Of the 250 participants the total *Social Language-Learning Strategies* scores ranged from 6 to 30 with a mean score of 19.50 (*SD* = 5.38). Among the participants there were 80 male respondents and 169 female respondents. The mean score for the male respondents was 17.96 (*SD* = 5.39) and for the female respondents 20.24 (*SD* = 5.25). The responses for *Social Language-Learning Strategies* are shown in table 4-30.

Table 4-30

Social Language-Learning Strategies

Item	Response Categories Percent Distribution					Mean
	Never or almost never true of me	**Usually not true of me**	**Somewhat true of me**	**Usually true of me**	**Always or almost always true of me**	
45 If I do not understand something in (Spanish, French, Italian), I ask the other person to slow down or say it again.	6.4%	9.2%	27.1%	33.1%	24.3%	3.60
46 I ask (Spanish, French, Italian) speakers to correct me when I talk.	20.7%	14.3%	27.5%	19.5%	17.9%	3.00
47 I practice (Spanish, French, Italian) with other students.	21.9%	17.95	27.1%	22.3%	10.8%	2.82
48 I ask for help from (Spanish, French, Italian) speakers.	19.1%	15.1%	21.1%	25.9%	18.7%	3.10
49 I ask questions in (Spanish, French, Italian).	8.4%	18.0%	28.8%	27.6%	17.2%	3.27
50 I try to learn about the culture of (Spanish, French, Italian) speakers.	6.8%	11.2%	21.5%	24.7%	35.9%	3.72
Total Mean Score						**19.50**

Expected Course Grade

Expected course grade was measured using an 11-point grading scale in which the respondents selected their expected grade. The average expected a course grade of the total sample was 3.37 (*SD* = .*60*). More than half of the total sample population reported expected course grades of B (3.0) or higher (86.7%). Of the 254 valid respondents 82 male selected an expected course grade of B (3.0) (25.9%) or higher. Of the 172 female respondents, 29.7% selected an A or A+ as their expected grade. More female respondents selected an expected course grade of B+ or higher than did their male counterpart. Most of the respondents selected expected grades B- (2.67) or higher. None of the respondents selected an F (0.0) as an expected course grade. Expected Course Grades by total sample and gender are displayed in Table 4-31.

Table 4-31

Expected Course Grade: Total Sample and by Gender

Variables	Male		Female		Total Sample	
	Frequency	Valid Percent	Frequency	Valid Percent	Frequency	Valid Percent
Expected Course Grade	n=82		n=172		n=254	
A or A+ (4.0)	19	23.5%	51	29.7%	70	27.6%
A- (3.67)	14	17.3%	39	22.7%	53	20.9%
B+ (3.33)	13	16.0%	32	18.6%	46	18.1%
B (3.0)	21	25.9%	30	17.4%	51	20.1%
B- (2.67)	5	6.2%	10	5.8%	15	5.9%
C+(2.33)	2	2.5%	3	1.7%	5	2.0%
C (2.0)	2	2.5%	5	2.9%	7	2.8%
C- (1.67)	4	4.9%	1	0.6%	5	2.0%
D (1.0)	1	1.2%	1	0.6%	2	0.8%
F (0.0)	0	0.0%	0	0.0%	0	0.0%

Research Question 2: Differences in the Expected Course Grade of English Speaking College Students Learning a Romance Language According to Demographic Characteristics, Language-Learning Experiences, Motivation, or Language-Learning Strategies

Does expected course grade differ significantly according to the demographic characteristics, language-learning experience, motivation, or language-learning strategies of English-speaking college students learning a romance language?

Independent *t*-tests (for two group comparisons such as gender and ethnicity), ANOVA with LSD and Scheffe post hoc comparisons (for three or more group comparisons such as race) were used to see if expected course grade differed significantly according to the demographic characteristics and foreign language-learning experiences of English-speaking college students who are learning a romance language. Because analyses related to motivation and language-learning strategies would have involved creating categories for ranges of continuous scores, those analyses were not conducted.

Demographic Characteristics

Gender. Female English-speaking college students learning a romance language had significantly higher expected course grades (M= 3.43, SE = .04) than their male counterparts (M = 3.25, SE = .07, $t(251) = -2.23$, $p < .05$). Differences in expected course grade according to female and male English-speaking college students learning a romance language is displayed in Table 4-32.

Table 4-32

Summarized T-test Results for Expected Course Grade According to Gender

Gender	N	Mean	Mean Difference	*t*-value	*p*-value
Male	81	3.25	- .179	-2.22	.03
Female	172	3.43			

Age. For the total sample, respondents who were 18 years old reported the highest expected course grades ($M = 3.65$, SD = .36), while those who were 22 years old reported the lowest expected course grade ($M = 3.10$, $SD = .71$). The Levene's test statistic was significant ($p = .004$), indicating a violation of homogeneity of variances, one of the assumptions of parametric data. When the homogeneity of variance assumption is violated, the Welch *F*-ratio is reported (Field, 2005). The results for the Welch statistic indicated a significant effect of age on expected course grade $F(5, 96.07) = 3.35$, $p < .05$. Results of ANOVA of difference in expected course grade according to the age of English-speaking college students learning a romance language is displayed in Table 4-33.

Table 4-33

ANOVA of Differences in Expected Course Grade According to Age (N = 250)

Variable	N	Mean Expected Course Grade	*df*	*Welch F*	*p*
Age			5	3.35	.01
18	23	3.65			
19	50	3.46			
20	57	3.40			
21	50	3.32			
22	25	3.10			
23 and over	45	3.27			

College grade level. For the total sample, those who were freshmen reported the highest expected course grade (M = 3.54, SD = .42), while those who were seniors reported the lowest expected course grade (M = 3.14, SD = .79). The Levene's test statistic was also significant (p = .000) for college grade level, indicating a violation of homogeneity of variances, one of the assumptions of parametric data. When the homogeneity of variance assumption is violated, the Welch F-ratio is reported (Field, 2005). The results for the Welch statistic indicated a significant effect of college grade level on expected course grade $F(3,129.04) = 3.94$, $p < .05$. Results of ANOVA of differences in expected course grade according to college grade level is shown in Table 4-34.

Table 4-34

ANOVA of Differences in Expected Course Grade According to College Grade Level: (N = 252)

Variable	N	Mean Expected Course Grade	*df*	*Welch F*	*p*
College Grade Level			3	3.94	.01
Freshman	45	3.54			
Sophomore	65	3.45			
Junior	83	3.37			
Senior	59	3.14			

College major. Students who majored in IT, engineering, and science reported the highest expected courser grade (M = 3.76, SD = .42), while those who majored in humanities, social science, education and human development reported the lowest expected course grade (M = 3.33, SD = .59). There was not an effect of college major on expected course grade F (5, 248) =1.50, $p > .05$. Results of ANOVA of differences in expected course grade according to college majors is shown in Table 4-35.

Table 4-35

ANOVA of Differences in Expected Course Grade According to College Major: (N = 254)

Variable	N	Mean Expected Course Grade	*df*	*F*	*p*
College Major			5	1.50	.191
Undecided	14	3.55			
Humanities, Social Science, Education & Human Development	201	3.33			
Health & Human Services	6	3.61			
IT, Engineering, & Science	10	3.77			
Management	10	3.40			
The Arts	13	3.39			

Race. Students classified as "other" had the highest expected course grade (M= 3.72, SD .389) while those who classified themselves as native Hawaiian or other pacific islander had the lowest expected course grade (M= 3.33, SD = .471). There was not a significant effect of race on expected course grade level $F(5, 241) = .76$, $p > .05$). Results of ANOVA of expected course grade according to race is presented in Table 4-36.

Table 4-36

ANOVA of Differences in Expected Course Grade According to Race: (N = 247)

Variable	N	Mean Expected Course Grade	*df*	*F*	*p*
Race			**5**	**0.78**	**.57**
White	206	3.35			
Black	21	3.49			
Asian	9	3.48			
American Indian or Alaska Native	1	3.67			
Native Hawaiian or other Pacific Islander	4	3.33			
Other	6	3.72			

Ethnicity. The Hispanic or Latino students reported having higher expected course grades (M= 3.51, SE = .11) than Non-Hispanic or Non-Latino students learning a romance language (M = 3.37, SE = .04, $t(220)$ = .76, $p > .05$), the difference was not significant. Differences in expected course grade between Hispanic or Latino and Non-Hispanic or Non-Latino English-speaking college students learning a romance language is shown in Table 4-37.

Table 4-37

Comparison of Expected Course Grades According to Ethnicity: Hispanic or Latino vs. Non-Hispanic or Non-Latino English Speaking College Students

Group and Variable	N	Mean	Mean Difference	*t*-value	*p*-value
Expected Course Grade					
Hispanic or Latino	11	3.51			
			.138	.76	.44
Non Hispanic or Non-Latino	211	3.37			

Language-Learning Experience

Number of languages spoken. Students who spoke four or more languages reported the highest expected course grade ($M = 4.00$, SD =00) while students who spoke 1 language reported the lowest expected course grade ($M = 3.26$, SD = .62). There was a significant effect of numbers of languages spoken on expected course grade $F(3, 242 = 5.43, p < .05)$. Results of ANOVA of differences in expected course grade according to the number of languages spoken are shown in Table 4-38.

Table 4-38

ANOVA of Differences in Expected Course grade According to Number of Language Spoken: (N = 246)

Variable	N	Mean Score	Mean Difference	*df*	*F*	*p*	Post Hoc Comparisons	
							p LSD	*p* Scheffe
Years				**3**	**5.43**	**.00**		
Speaks 1 language	149	3.25						
Speaks 2 languages	69	3.53						
Speaks 3 languages	25	3.52						
Speaks 4 languages	2	4.00						
Speaks 1 > Speaks 4			0.75				.03	ns
Speaks 1 > Speaks 3			0.27				.04	ns
Speaks 1 > Speaks 2			0.28				.00	.01

Years studying a language. Students who had studied a language for 6 to 20 years reported the highest expected course grade ($M = 3.60$, $SD = .47$), while those who had studied a language for 1.5 to 2.5 years reported the lowest expected course grade ($M = 3.18$, $SD = .63$). There was a significant effect of years spent studying a language on the expected course grade of respondents $F(4, 245) = 4.22$, $p < .05$). Results of ANOVA of differences in the expected course grade according to years studied a language in Table 4-39.

Table 4-39

ANOVA of Differences in Expected Course Grade According to Years Studied a Language: (N = 250)

Variable	N	Mean Score	Mean Difference	*df*	*F*	*p*	Post Hoc Comparisons	
							p LSD	*p* Scheffe
Years				**4**	**4.21**	**.396**		
0 to 1	70	3.23						
1.5 to 2.5	43	3.18						
3 to 4	58	3.42						
4.5 to 5.5	39	3.51						
6 to 20	40	3.60						
6 to 20 > 0 to 1			0.37				.00	.05
6 to 20 > 1.5 to 2.5			0.41				.00	.04
4.5 to 5.5 > 0 to 1			0.28				.02	ns
4.5 to 5.5 > 1.5 to 2.5			0.33				.01	ns
3 to 4 > 1.5 to 2.5			0.24				.05	ns

Research Question 3: Difference in Language-Learning Strategies According to Demographic Characteristics, Language-Learning Experience, or Motivation

Does the frequency of language-learning strategies' use differ significantly according to the demographic characteristics, language-learning experiences, or motivation, of English-speaking college students learning a romance language?

Nine independent analyses, *t*-tests and ANOVAs, were conducted to test whether English-speaking college students learning a romance language had significant difference in language-learning strategies according to demographic characteristics, and language-

learning experiences, (total *SILL* scores, total *Direct* and *Indirect Language-Learning Strategies*, and each individual total strategy score) according to gender.

Total SILL Use

Gender. Female English-speaking college students learning a romance language had significantly higher total language-learning strategy scores (M= 151.42, SE = 2.21) than male students learning a romance language (M= 140.47, SE = 3.34, t (233) = -2.77, p < .05). There was a significant difference in total language-learning strategy use between male and female respondents. The difference in the total language-learning strategy scores between male and female English-speaking college students learning a romance language is displayed in Table 4-40.

Table 4-40

Difference of Total Language-Learning Strategies According to Gender

Group and Variable	N	Mean	Mean Difference	*t*-value	*p*-value
Total LLS					
Male	76	140.47	-10.94	-2.77	.01
Female	159	151.42			

Age. For the total sample, respondents who were 20 years old had the highest total *SILL* score (M = 152.37, SD = 28.50), while those who were 22 years old reported the lowest total *SILL* score (M = 138.96, SD = 29.94). The Levene's test statistic was not significant (p = .958), indicating there was not a violation of homogeneity of variances. There was not a significant effect of age on the total *SILL* score (F = 1.75, p = .12).

Results of ANOVA of differences in total *SILL* score according to the age of English-speaking college students learning a romance language is displayed in Table 4-41.

Table 4-41

ANOVA of Differences in Total SILL Scores According to Age (N = 232)

Variable	N	Mean Score	*df*	*F*	*p*
Age			**5**	**1.75**	**.12**
18	23	152.17			
19	47	151.87			
20	54	152.37			
21	46	139.78			
22	23	138.96			
23 and over	39	147.10			

College grade level. For the total sample, those who were freshmen reported the highest total *SILL* score (M = 152.34, SD = 28.96), while seniors had the lowest total *SILL* score (M = 138.98, SD = 29.02). The Levene's test statistic was also not significant (p = .989) for college grade level indicating no violation of homogeneity of variance. There was not a significant effect of college grade level on the total *SILL* score (F = 2.35, p = .07). Results of ANOVA of difference in total *SILL* score according to the college grade level of English-speaking college students learning a romance language is displayed in Table 4-42.

Table 4-42

ANOVA of Differences in Total SILL Scores According to College Grade Level: (N = 234)

Variable	N	Mean Score	*df*	*F*	*p*
College Grade Level			**3**	**2.35**	**.07**
Freshman	44	152.34			
Sophomore	59	150.14			
Junior	76	149.41			
Senior	55	138.98			

College major. For the total sample, English-speaking college students who reported management as a college major had the highest total *SILL* score (M = 162.00, SD = 24.57), while those respondents who reported Humanities, Social Science, Education and Human Development as their major had lowest total *SILL* score (M = 146.20, SD = 28.99). The Levene's test statistic was not significant (p = .159), indicating there was not a violation of homogeneity of variances. There was not a significant effect of college major on the total *SILL* score (F = .858, p = .51). Results of ANOVA of differences in total *SILL* scores according to the college major of English-speaking college students learning a romance language is displayed in Table 4-43.

Table 4-43

ANOVA of Differences in Total SILL Scores According to College Major (N = 236)

Variable	N	Mean Score	*df*	*F*	*p*
College Major			5	.858	.15
Undecided	13	153.92			
Humanities, Social Science, Education & Human Development	186	146.20			
Health & Human Services	5	147.60			
IT, Engineering, & Science	9	147.56			
Management	10	162.00			
The Arts	13	154.31			

Race. English-speaking college students classified as "other" had the highest total *SILL* score (M = 153.67, SD = 42.01). Although the majority of students in the study were White (N = 193), students classified as Asian reported the lowest total *SILL* score (M = 135.38, SD = 34.06). The Levene's test was not significant (p = .521) and there was not a significant effect of race on total *SILL* score (F = .489, p = .744). Results of ANOVA of difference of total *SILL* scores according to race is presented in Table 4-44.

Table 4-44

ANOVA of Differences of Total SILL Scores According to Race: (N = 229)

Variable	N	Mean Score	*df*	*F*	*p*
Race			**4**	**.489**	**.74**
White	193	148.09			
Black	17	150.59			
Asian	8	135.38			
American Indian or Alaska Native, Native Hawaiian or other Pacific Islander	5	150.80			
Other	6	153.67			

Ethnicity. Non-Hispanic or Latino English-speaking college students learning a romance language had higher total *SILL* scores (M= 148.16, SE = 2.08) than Hispanic or Latino students learning a romance language (M= 146.64, SE = 9.26, t (206) = -.168, $p >$ .05). There was not a significant difference in total language-learning strategy use between Non-Hispanic or Non-Latino and Hispanic or Latino respondents. The difference in the total language-learning strategies scores between Non-Hispanic or Non-Latino or Hispanic or Latino English-speaking college students learning a romance language are displayed in Table 4-45.

Table 4-45

Difference in Total SILL Scores Use According to Ethnicity

Group and Variable	N	Mean	Mean Difference	*t*-value	*p*-value
Total LLS					
Non-Hispanic or Non-Latino	197	148.16			
			-1.52	-.168	.86
Hispanic or Latino	11	146.64			

Number of languages spoken. For the total sample, students who spoke four or more languages reported the highest total *SILL* score (M = 183.33, SD = 34.53) and students who speak 1 language reported the lowest *SILL* score (M = 145.91, SD = 26.84). These differences were not significant (F = 2.02, p = .111). Results of ANOVA of differences in total *SILL* score according to the number of languages spoken are shown in Table 4-46.

Table 4-46

ANOVA of Differences in Total SILL Scores According to Number of Languages Spoken: (N = 230)

Variable	N	Mean Score	*df*	*F*	*p*
Total *SILL* Scores					
Number of Languages Spoken			**3**	**2.02**	**.11**
Speaks 1 language	137	145.91			
Speaks 2 languages	66	148.77			
Speaks 3 languages	24	152.13			
Speaks 4 languages	3	183.33			

Years studying the language. Students who had studied a language for 6 to 20 years reported the highest total *SILL* score (M = 152.17, SD = 31.13), while those who had studied a language for 3 to 4 years reported the lowest total *SILL* score (M = 144.56, SD = 24.40). There was a significant effect of years spent studying a language on expected total *SILL* score (F= .447, p = .775). Results of ANOVA of differences in total *SILL* scores according to years spent studying a language are presented in Table 4-47.

Table 4-47

ANOVA of Differences in Total SILL Scores According to Years Studying a Language: (N = 232)

Variable	N	Mean Score	*df*	*F*	*p*
Years Studying a Language			**4**	**.447**	**.77**
0 to 1	67	149.15			
1.5 to 2.5	39	148.21			
3 to 4	54	144.56			
4.5 to 5.5	36	146.06			
6 to 20	36	152.17			

Memory Language-Learning Strategy Use

Gender. According to the independent sample t-test conducted female English-speaking college students learning a romance language had significantly higher *Memory Language-Learning Strategies* scores (M= 26.96, SE = .44) than did their male counterparts (M= 23.77, SE = .69, $t(243) = -3.95$, $p < .05$). There was a difference in *Memory Language-Learning Strategies* use according to female and male respondents. The difference in the total *Memory Language-Learning Strategies* scores between male and female English-speaking college students learning a romance language is displayed in Table 4-48.

Table 4-48

Differences in Memory Language-Learning Strategies Scores According to Gender

Group and Variable	N	Mean	Mean Difference	*t*-value	*p*-value
Memory LLS					
Male	79	23.77			
			-3.18	-3.95	.00
Female	166	26.96			

Age. For the total sample, respondents who were 23 years old and over had the highest total *Memory Language-Learning Strategies* score ($M = 27.16$, SD = 5.70), while those who were 18 years old reported the lowest total *Memory Language-Learning Strategies* score ($M = 24.22$, $SD = 6.61$). The Levene's test statistic was not significant ($p = .889$). However, age did not have a significant effect on the total *Memory Language-Learning Strategies* score, displaying a trend relationship between the two variables ($F = 2.16$, $p = .058$). Results of ANOVA of difference in total *Memory Language-Learning Strategies* score according to the age of English-speaking college students learning a romance language is displayed in Table 4-49.

Table 4-49

ANOVA of Differences in total Memory Language-Learning Strategy Score According to Age (N = 242)

Variable	**N**	**Mean Memory LLS Score**	***df***	***F***	***p***
Age			**5**	**2.16**	**.06**
18	23	24.22			
19	47	26.45			
20	56	27.09			
21	49	24.31			
22	24	24.63			
23 and over	43	27.16			

College grade level. For the total sample, those who were sophomores reported the highest total *Memory Language-Learning Strategies* score (M = 27.12, SD = 5.96), while seniors had the lowest total *Memory Language-Learning Strategies* score (M = 24.74, SD = 5.76). The Levene's test statistic was also not significant (p = .497) for college grade level indicating no violation of homogeneity of variance. There was not a significant effect of college grade level on the total *Memory Language-Learning Strategies* score (F = 1.65, p = .178). Results of ANOVA of difference in total *Memory Language-Learning Strategies* according to the college grade level of English-speaking college students learning a romance language is illustrated in Table 4-50.

Table 4-50

ANOVA of Differences in Total Memory Language-Learning Strategy Scores According to College Grade Level: (N = 244)

Variable	**N**	**Mean Score**	***df***	***F***	***p***
College Grade Level			**3**	**1.65**	**.17**
Freshman	45	25.38			
Sophomore	61	27.12			
Junior	81	26.05			
Senior	57	24.74			

College major. For the total sample, English-speaking college students who reported Health and Human Services as a college major had the highest total *Memory Language-Learning Strategies* score (M = 28.00, SD = 4.47), while those respondents who reported Humanities, Social Science, Education and Human Development as their

major had lowest total *Memory Language-Learning Strategies* score (M = 25.71, SD = 5.96). The Levene's test statistic was significant (p = .016), indicating there was a violation of homogeneity of variances. As previously stated, when the homogeneity of variance is violated, the Welch F-ratio is reported (Field, 2005). The results for the Welch statistic indicated there was not a significant effect of college grade level on *Memory Language-Learning Strategies* score $F(5, 12.79) = .343$, $p > .05$. Results of ANOVA of difference in total *Memory Language-Learning Strategies* according to the college major of English-speaking college students learning a romance language is displayed in Table 4-51.

Table 4-51

ANOVA of Differences in Total Memory Language-Learning Strategy According to College Major (N = 246)

Variable	**N**	**Mean Memory LLS**	***df***	***F***	***p***
College Major			**5**	**.343**	**.89**
Undecided	14	26.00			
Humanities, Social Science, Education & Human Development	194	25.71			
Health & Human Services	6	28.00			
IT, Engineering, & Science	9	27.11			
Management	10	27.20			
The Arts	13	26.08			

Race. English-speaking college students classified as American Indian, Alaska Native, Native Hawaiian, or other Pacific Islander had the highest total *Memory*

Language-Learning Strategies score (M = 28.80, SD = 5.85). Although the majority of students in the study were white (N= 200), students classified as Asian reported the lowest total *Memory Language-Learning Strategies* score (M = 24.25, SD = .6.50). The Levene's test was not significant (p = .494) and there was not a significant effect of race on total *Memory Language-Learning Strategies* score (F = .641, p = .634). Results of ANOVA of difference of total *Memory Language-Learning Strategies* scores according to race is presented in Table 4-52.

Table 4-52

ANOVA of Differences in Memory Language-Learning Strategies Scores According to Race: (N = 239)

Variable	N	Mean Score	*df*	*F*	*p*
Race			**4**	**.641**	**.63**
White	200	25.84			
Black	20	27.15			
Asian	8	24.25			
American Indian or Alaska Native, Native Hawaiian or other Pacific Islander	5	28.80			
Other	6	25.50			

Ethnicity. Non-Hispanic or Non-Latino English-speaking college students learning a romance language had slightly higher total *Memory Language-Learning Strategies* scores (M= 25.80, SE = .42) than Hispanic or Latino students learning a romance language (M= 25.73, SE = 1.74, t (213) = -.044, $p > .05$). There was not a significant difference in total *Memory Language-Learning Strategies* use between Non-

Hispanic or Non-Latino and Hispanic or Latino respondents. The difference in the total *Memory Language-Learning Strategies* scores between Non-Hispanic or Non-Latino and Hispanic or Latino English-speaking college students learning a romance language are shown in Table 4-53.

Table 4-53

Differences in Total Memory Language-Learning Strategies Scores According to Ethnicity

Group and Variable	N	Mean	Mean Difference	*t*-value	*p*-value
Total LLS					
Non-Hispanic or Non-Latino	204	25.80			
			-.081	-.044	.965
Hispanic or Latino	11	25.73			

Number of languages spoken. For the total sample, students who spoke four or more languages reported the highest total *Memory Language-Learning Strategies* score (M = 28.67, SD = 7.23) and students who speak 2 languages reported the lowest *Memory Language-Learning Strategies* score (M = 25.47, SD = 6.00). The Levene's test was not significant (p = .510). The differences were also not significant (F = .406, p = .749). Results of ANOVA of differences in total *Memory Language-Learning Strategies* scores according to the number of language spoken are shown in Table 4-54.

Table 4-54

ANOVA of Differences in Memory Language-Learning Strategies Scores According to Number of Language Spoken: (N = 238)

Variable	N	Mean Score	*df*	*F*	*p*
Number of Language Spoken			**3**	**.406**	**.75**
Speaks 1 language	143	26.16			
Speaks 2 languages	68	25.47			
Speaks 3 languages	24	25.71			
Speaks 4 languages	3	28.67			

Years studying the language. Students who had studied a language for 0 to 1 year reported the highest total *Memory Language-Learning Strategies* score (M = 27.22, SD = 5.76), while those who had studied a language for 4.5 to 5.5 years reported the lowest total *Memory Language-Learning Strategies* score (M = 24.35, SD =6.49). The Levene's test was not significant (p = .549) and there was not a significant effect of years spent studying a language on expected total *Memory Language-Learning Strategies* (F= 1.67, p = .157). Results of ANOVA of differences in total *Memory Language-Learning Strategies* scores according to years studied a language in Table 4-55.

Table 4-55

ANOVA of Differences in Total Memory Language-Learning Strategies Scores According to Years Studied a Language: (N = 232)

Variable	N	Mean Score	*df*	*F*	*p*
Years Studying a Language			**4**	**1.67**	**.15**
0 to 1	68	27.22			
1.5 to 2.5	42	26.29			
3 to 4	57	25.18			
4.5 to 5.5	37	24.35			
6 to 20	38	25.87			

Cognitive Language-Learning Strategy Use

Gender. According to the independent sample t-test conducted female English-speaking college students learning a romance language had significantly higher *Cognitive Language-Learning Strategies* scores (M= 42.58, SE = .72) than did their male counterpart (M= 39.38, SE = 1.04, $t(246) = -2.52$, $p < .05$). There was a difference in *Cognitive Language-Learning Strategies* use according to female and male respondents. The difference in the total *Cognitive Language-Learning Strategies* scores between male and female English-speaking college students learning a romance language is displayed in Table 4-56.

Table 4-56

Differences in Cognitive Language-Learning Strategies scores According to Gender

Group and Variable	N	Mean	Mean Difference	*t*-value	*p*-value
Cognitive LLS					
Male	79	39.38	-3.20	-2.51	.01
Female	169	42.58			

Age. For the total sample, respondents who were 18 years old reported the highest *Cognitive Language-Learning Strategies* (M = 43.65, SD = 9.99), while those who were 21 years old reported the lowest *Cognitive Language-Learning Strategies* (M = 39.12, SD = 8.90). The Levene's test statistic was not significant (p = .813), indicating there was not a violation of homogeneity of variances. There was not a significant effect of age on *Cognitive Language-Learning Strategies* (F= 1.54, p = .179). Results of ANOVA of differences in total *Cognitive Language-Learning Strategies* scores according to the age of English-speaking college students learning a romance language is shown in Table 4-57.

Table 4-57

ANOVA of Differences in Total Cognitive Language-Learning Strategies Scores According to Age (N = 250)

Variable	N	Mean Score	*df*	*F*	*p*
Age			**5**	**1.54**	**.18**
18	23	43.65			
19	49	42.14			
20	57	42.91			
21	49	39.32			
22	25	39.32			
23 and over	42	41.00			

College grade level. For the total sample, freshmen reported the highest total *Cognitive Language-Learning Strategies* score (M = 43.07, SD = 9.13) and seniors reported the lowest total *Cognitive Language-Learning Strategies* score (M = 39.64, SD = 9.37). The Levene's test statistic was also not significant (p = .805) for college grade level indicating no violation of homogeneity of variance. There was not a significant effect of college grade level on the total *Cognitive Language-Learning Strategies* score (F = 1.25, p = .293). Results of ANOVA of difference in total *Cognitive Language-Learning Strategies* according to the college grade level of English-speaking college students learning a romance language is displayed in Table 4-58.

Table 4-58

ANOVA of Differences in Total Cognitive Language-Learning Strategies Scores According to College Level: (N = 247)

Variable	N	Mean Score	*df*	*F*	*p*
College Grade Level			**3**	**1.25**	**.29**
Freshman	45	43.07			
Sophomore	64	41.78			
Junior	79	41.89			
Senior	59	39.64			

College major. For the total sample, English-speaking college students who stated a major in the Arts had the highest total *Cognitive Language-Learning Strategies* score (M = 45.77, SD = 7.33), while those respondents who reported Humanities, Social Science, Education and Human Development as their major had lowest total *Cognitive Language-Learning Strategies* score (M = 40.96, SD = 9.72). The Levene's test statistic was not significant (p = .797). There was not a significant effect of college grade level on *Cognitive Language-Learning Strategies* score (F = *1.00*, p = .417). The results of ANOVA of difference in total *Cognitive Language-Learning Strategies* according to the college major of English-speaking college students learning a romance language is displayed in Table 4-59.

Table 4-59

ANOVA of Differences in Total Cognitive Language-Learning Strategies Scores According to College Major (N = 249)

Variable	N	Mean Cognitive LLS	*df*	*F*	*p*
College Major			**5**	**1.00**	**.42**
Undecided	14	42.86			
Humanities, Social Science, Education & Human Development	196	40.96			
Health & Human Services	6	41.00			
IT, Engineering, & Science	10	43.50			
Management	10	44.40			
The Arts	13	45.77			

Race. English-speaking college students who were classified as "other" (6) had the highest total *Cognitive Language-Learning Strategies* score (M = 43.83, SD = 8.68). English-speaking college students classified as Asian reported the lowest total *Cognitive Language-Learning Strategies* score (M = 34.13, SD = 9.03). The Levene's test was not significant (p = .715) and there was not a significant effect of race on total *Cognitive Language-Learning Strategies* score (F = 1.62, p = .169). The result of ANOVA of difference of total *Cognitive Language-Learning Strategies* scores according to race is presented in Table 4-60.

Table 4-60

ANOVA of Differences of Cognitive Language-Learning Strategies Scores According to Race: (N = 242)

Variable	N	Mean Score	*df*	*F*	*p*
Race			**5**	**1.62**	**.17**
White	203	41.72			
Black	20	43.10			
Asian	8	34.13			
American Indian or Alaska Native, Native Hawaiian or other Pacific	5	38.60			
Other	6	43.83			

Ethnicity. Non-Hispanic or Non-Latino English-speaking college students learning a romance language had higher total *Cognitive Language-Learning Strategies* scores (M= 41.73, SE = .665) than Hispanic or Latino students learning a romance language (M= 39.73, SE = 3.19, t (216) = -.672, $p > .05$). There was not a significant difference in total *Cognitive Language-Learning Strategies* use between Non-Hispanic or Non-Latino and Hispanic and Latino respondents. The difference in the total *Cognitive Language-Learning Strategies* scores between Non-Hispanic or Non-Latino and Hispanic or Latino English-speaking college students learning a romance language are displayed in Table 4-61.

Table 4-61

Differences in Total Cognitive Language-Learning Strategies Scores According to Ethnicity

Group and Variable	N	Mean	Mean Difference	*t*-value	*p*-value
Total LLS					
Non-Hispanic or Non-Latino	207	41.73			
			-2.00	-.672	.502
Hispanic or Latino	11	39.73			

Number of languages spoken. For the total sample, students who spoke four or more languages reported the highest total *Cognitive Language-Learning Strategies* score (M = 53.33, SD = 9.24) and students who speak 1 language reported the lowest *Cognitive Language-Learning Strategies* score (M = 40.47, SD = 8.96). The Levene's test was not significant (p = .966). However, the differences were significant (F = 3.20, p = .024). Results of ANOVA of differences in total *Cognitive Language-Learning Strategies* scores according to the number of language spoken are shown in Table 4-62.

Table 4-62

ANOVA of Differences in Cognitive Language-Learning Strategies Scores According to Number of Languages Spoken: (N = 242)

Variable	N	Mean Score	*df*	*F*	*p*
Number of Language Spoken			**3**	**3.20**	**.02**
Speaks 1 language	145	40.47			
Speaks 2 languages	69	43.02			
Speaks 3 languages	25	43.36			
Speaks 4 languages	3	53.33			

Years studying the language. Students who studied a language for 6 to 20 years reported the highest total *Cognitive Language-Learning Strategies* score (M = 43.51, SD = 8.88), while those who had studied a language for 4.5 to 5.5 years reported the lowest total *Cognitive Language-Learning Strategies* score (M = 40.42, SD =9.48). The Levene's test was not significant (p = .524) and there was not a significant effect of years spent studying a language on total *Cognitive Language-Learning Strategies* (F= .640, p = .635). Results of ANOVA of differences in total *Cognitive Language-Learning Strategies* scores according to years studied a language in Table 4-63.

Table 4-63

ANOVA of Differences in Total Cognitive LLS Scores According to Years Studying a Language: (N = 232)

Variable	N	Mean Score	*df*	*F*	*p*
Years Studying a Language			**4**	**.640**	**.64**
0 to 1	68	27.22			
1.5 to 2.5	42	26.29			
3 to 4	57	25.18			
4.5 to 5.5	37	24.35			
6 to 20	38	25.87			

Compensation Language-Learning Strategy Use

Gender. Female English-speaking college students learning a romance language had higher *Compensation Language-Learning Strategies* scores (M= 18.41, SE = .30) than did their male counterpart (M= 17.94, SE = .48, $t(245) = -.863$, $p > .05$). There was not a significant difference (p= .38) between male and female *Compensation Language-Learning Strategies* use. The difference in the *Compensation Language-Learning Strategies* scores between male and female English-speaking college students learning a romance language is shown in Table 4-64.

Table 4-64

Differences in Compensation Language-Learning Strategies Scores According to Gender

Group and Variable	N	Mean	Mean Difference	*t*-value	*p*-value
Male	78	17.94	-.47	-.86	.38
Female	169	18.41			

Age. For the total sample, respondents who were 19 years old reported the highest total *Compensation Language-Learning Strategies* score (M = 19.26, SD = 3.82), while those who were 22 years old reported the lowest total *Compensation Language-Learning Strategies* score (M = 16.84, SD = 4.55). The Levene's test statistic was not significant (p = .982). However, the ANOVA was significant indicating there was an effect of age on the total *Compensation Language-Learning Strategies* scores (F = 2.51, p = .031). Results of ANOVA of differences in total *Compensation Language-Learning Strategies* scores according to the age of English-speaking college students learning a romance language is shown in Table 4-65.

Table 4-65

ANOVA of Differences in Compensation Language-Learning Strategies Scores According to Age (N = 244)

Variable	N	Mean Score	Mean Difference	*df*	*F*	*p*	Post Hoc Comparisons	
							p LSD	*p* Scheffe
Age				**5**	**2.51**	.03		
18	23	18.74						
19	50	19.26						
20	56	18.61						
21	47	18.70						
22	25	16.84						
23 and over	43	16.91						
22 > 19			2.42				.01	ns
23 and over > 19			2.35				.01	ns
23 and over > 20			1.70				.04	ns
23 and over > 21			1.79				.03	ns

College grade level. For the total sample, sophomores reported the highest total *Compensation Language-Learning Strategies* score (M = 18.86, SD = 4.32) and seniors reported the lowest total *Compensation Language-Learning Strategies* score (M = 17.07, SD = 4.13). The Levene's test statistic was also not significant (p = .772) for college grade level. There was not a significant effect of college grade level on the total *Compensation Language-Learning Strategies* score (F = 2.46, p = .063). Results of ANOVA of difference in total *Compensation Language-Learning Strategies* scores according to the college grade level of English-speaking college students learning a romance language is displayed in Table 4-66.

Table 4-66

ANOVA of Differences in Total Compensation Language-Learning Strategies Scores According to College Level: (N = 246)

Variable	N	Mean Score	*df*	*F*	*p*
College Grade Level			**3**	**2.46**	**.06**
Freshman	44	18.82			
Sophomore	64	18.86			
Junior	80	18.35			
Senior	58	17.07			

College major. For the total sample, English-speaking college students who stated a major in Management had the highest total *Compensation Language-Learning Strategies* score (M = 21.40, SD = 3.72), while those respondents who reported IT, Engineering and Science as their major had the lowest total *Compensation Language-Learning Strategies* score (M = 17.70, SD = 4.88). The Levene's test statistic was not significant (p = .237). There was not a significant effect of college major on *Compensation Language-Learning Strategies* score ($F = 1.53$, p = .181). The results of ANOVA of difference in total *Compensation Language-Learning Strategies* according to the college major of English-speaking college students learning a romance language is displayed in Table 4-67.

Table 4-67

ANOVA of Differences in Total Compensation Language-Learning Strategies Scores According to College Major (N = 248)

Variable	N	Mean Compensation LLS	*df*	*F*	*p*
College Major			**5**	**1.53**	**.18**
Undecided	13	18.69			
Humanities, Social Science, Education & Human Development	197	18.06			
Health & Human Services	5	18.40			
IT, Engineering, & Science	10	17.70			
Management	10	21.40			
The Arts	13	19.23			

Race. English-speaking college students classified as other (6), had the highest total *Compensation Language-Learning Strategies* score, though the other mean scores were relatively close (M = 18,83, SD = 5.64). English-speaking college students classified as American Indian, Alaska Native, Native Hawaiian, or other Pacific Islander (4) reported the lowest total *Compensation Language-Learning Strategies* score (M = 16.60, SD = 3.29). The Levene's test was not significant (p = .271), and there was not a significant effect of race on total *Compensation Language-Learning Strategies* score (F = .317, p = .866). Results of ANOVA of difference of total *SILL* according to race is presented in Table 4-68.

Table 4-68

ANOVA of Differences of Compensation Language-Learning Strategies Scores According to Race: (N = 241)

Variable	N	Mean Compensation LLS	*df*	*F*	*p*
Race			**4**	**.317**	**.87**
White	202	18.24			
Black	20	18.75			
Asian	8	18.00			
American Indian or Alaska Native, Native Hawaiian or other Pacific	5	16.60			
Other	6	18.83			

Ethnicity. Non-Hispanic or Non-Latino English-speaking college students learning a romance language had slightly higher total *Compensation Language-Learning Strategies* scores (M= 18.30, SE = .27) than Hispanic or Latino students learning a romance language (M= 18.00, SE = 1.25, t (217) = -.243, $p > .05$). There was not a significant difference in total *Compensation Language-Learning Strategies* use between Non-Hispanic or Non-Latino and Hispanic or Latino respondents. The differences in the *Compensation Language-Learning Strategies* scores between Non-Hispanic or Non-Latino and Hispanic or Latino English-speaking college students learning a romance language are illustrated in Table 4-69.

Table 4-69

Differences in Compensation Language-Learning Strategies Scores According to Ethnicity

Group and Variable	N	Mean	Mean Difference	*t*-value	*p*-value
Non-Hispanic or Non-Latino	208	18.00			
			-.302	-.243	.808
Hispanic or Latino	11	18.30			

Number of languages spoken. For the total sample, students who speak four or more languages reported the highest total *Compensation Language-Learning Strategies* score (M = 21.00, SD = 1.00), and students who speak one language reported the lowest *Compensation Language-Learning Strategies* score (M = 17.91, SD = 3.95). The Levene's test was not significant (p = .205), and there was not a significant effect of numbers of language spoken on *Compensation Language-Learning Strategies* (F = .674, p = .569). Results of ANOVA of differences in total *Compensation Language-Learning Strategies* scores according to the number of languages spoken are shown in Table 4-70.

Table 4-70.

ANOVA of Differences in Compensation Language-Learning Strategy According to Number of Language Spoken: (N = 240)

Variable	N	Mean Score	*df*	*F*	*p*
Number of Languages Spoken			**3**	**.674**	**.57**
Speaks 1 language	145	18.37			
Speaks 2 languages	67	17.91			
Speaks 3 languages	25	18.12			
Speaks 4 languages	3	21.00			

Years studying the language. Students who studied a language for 6 to 20 year reported the highest total *Compensation Language-Learning Strategies* score ($M = 19.29$, $SD = 4.61$), while those who had studied a language for 3 to 4 years reported the lowest total *Compensation Language-Learning Strategies* score ($M = 17.63$, $SD = 3.43$). The Levene's test was not significant ($p = .403$) and there was not a significant effect of years spent studying a language on total *Compensation Language-Learning Strategies* score ($F = .969$, $p = .425$). Results of ANOVA of differences in total *Compensation Language-Learning Strategies* scores according to years studied a language are presented in Table 4-71.

Table 4-71

ANOVA of Differences in Total Compensation Language-Learning Strategy Scores According to Years Studied a Language: (N = 244)

Variable	N	Mean Score	*df*	*F*	*p*
Years Studying a Language			**4**	**.969**	**.43**
0 to 1	70	18.20			
1.5 to 2.5	42	18.36			
3 to 4	57	17.63			
4.5 to 5.5	37	18.22			
6 to 20	38	19.29			

Total Direct LLS Use

Gender. Female English-speaking college students learning a romance language had significantly higher total *Direct Language-Learning Strategies* (LLS) scores (M= 88.20, SE = 1.19) than male students learning a romance language (M= 81.47, SE = 1.90, t (237) = -3.09, $p < .05$). There is a significant difference in the total of *Direct Language-Learning Strategies* use according to male and female respondents. The difference in the total *Direct Language-Learning Strategiès* scores between male and female English-speaking college students learning a romance language is displayed in Table 4-72.

Table 4-72

Differences of Direct Language-Learning Strategies According to Gender

Group and Variable	N	Mean	Mean Difference	*t*-value	*p*-value
Male	76	81.47	-6.72	-3.09	.00
Female	163	88.20			

Age. For the total sample, respondents who were 20 years old reported the highest total *Direct Language-Learning Strategies* score (M = 89.02, SD = 15.70), while those who were 22 years old reported the lowest total *Direct Language-Learning Strategies* score (M = 81.33, SD = 17.97). The Levene's test statistic was not significant (p = .817). There was not an effect of age on the total *Direct Language-Learning Strategies* scores (F = 1.49, p = .193). Results of ANOVA of differences in total *Direct Language-Learning Strategies* scores according to the age of English-speaking college students learning a romance language are shown in Table 4-73.

Table 4-73

ANOVA of Differences in Direct Language-Learning Strategy Scores According to Age (N= 236)

Variable	N	Mean Score	*df*	*F*	*p*
Age			**5**	**1.49**	**.19**
18	23	86.61			
19	47	88.17			
20	55	89.02			
21	47	82.55			
22	24	81.33			
23 and over	40	85.00			

College grade level. For the total sample, sophomores reported the highest total *Direct Language-Learning Strategies* score (M = 88.25, SD = 15.11), and seniors reported the lowest total *Direct Language-Learning Strategies* score (M = 81.63, SD = 16.83). The Levene's test statistic was also not significant (p = .973) for college grade level. There was not a significant effect of college grade level on the total *Direct Language-Learning Strategies* score (F = 1.98, p = .118). Results of ANOVA of

difference in total *Direct Language-Learning Strategies* according to the college grade level of English-speaking college students learning a romance language is displayed in Table 4-74.

Table 4-74

ANOVA of Differences in Total Direct Language-Learning Strategy Score According to College Grade Level: (N = 238)

Variable	**N**	**Mean Score**	***df***	***F***	***p***
College Grade Level			**3**	**1.98**	**.12**
Freshman	44	87.18			
Sophomore	60	88.25			
Junior	78	86.72			
Senior	56	81.63			

College major. For the total sample, English-speaking college students who stated a major in Management had the highest total *Direct Language-Learning Strategies* score ($M = 93.00$, SD = 11.05), while those respondents who reported Humanities, Social Science, Education, and Human Development as a major had lowest total *Direct Language-Learning Strategies* score ($M = 85.16$, $SD = 16.11$). The Levene's test statistic was not significant ($p = .300$). There was not a significant effect of college grade level on *Direct Language-Learning Strategies* score ($F = .813$, $p = .542$). The results of ANOVA of difference in total *Direct Language-Learning Strategies* according to the college major of English-speaking college students learning a romance language is displayed in Table 4-75.

Table 4-75

ANOVA of Differences in Total Direct Language-Learning Strategy Score According to College Major (N = 240)

Variable	N	Mean Direct LLS	*df*	*F*	*p*
College Major			**5**	**.813**	**.54**
Undecided	13	87.31			
Humanities, Social Science, Education & Human Development	190	85.16			
Health & Human Services	5	86.00			
IT, Engineering, & Science	9	88.33			
Management	10	93.00			
The Arts	13	91.08			

Race. Although Whites (1) were the largest population among English-speaking college students, Blacks (2) had the highest total *Direct Language-Learning Strategies* score (M = 89.39, SD = 17.38) while Asians (3) had the lowest total *Direct Language-Learning Strategies* score (M = 76.38, SD = 18.17). The Levene's test was not significant (p = .733) and there was not a significant effect of race on total *Direct Language-Learning Strategies* score (F = .987, p = .415). Results of ANOVA of difference of total *SILL* according to race is presented in Table 4-76.

Table 4-76

ANOVA of Differences of Direct Language-Learning Strategy According to Race: (N = 238)

Variable	N	Mean Direct LLS	*df*	*F*	*p*
Race			**4**	**.987**	**.42**
White	196	86.17			
Black	18	89.39			
Asian	8	76.38			
American Indian or Alaska Native, Native Hawaiian or other Pacific	5	84.00			
Other	6	88.17			

Ethnicity. Non-Hispanic or Non-Latino English-speaking college students learning a romance language had much higher total *Direct Language-Learning Strategies* scores (M= 86.05, SE = 1.15) than Hispanic or Latino students learning a romance language (M= 83.45, SE = 5.20, $t(209) = -.513$, $p > .05$). However, there was not a significant difference in total *Direct Language-Learning Strategies* use scores between Non-Hispanic or Non-Latino and Hispanic or Latino respondents. The difference in the total *Direct Language-Learning Strategies* scores between Non-Hispanic or Non-Latino and Hispanic or Latino English-speaking college students learning a romance language are displayed in Table 4-77.

Table 4-77

Difference of Total Direct Language-Learning Strategies According to Ethnicity

Group and Variable	N	Mean	Mean Difference	*t*-value	*p*-value
Total LLS					
Non-Hispanic or Non-Latino	200	86.05			
			-2.59	-.513	.608
Hispanic or Latino	11	83.45			

Number of languages spoken. For the total sample, English-speaking college students who speak four or more languages reported the highest total *Direct Language-Learning Strategies* score (M = 103.00, SD = 16.52) and students who speak 1 language reported the lowest *Direct Language-Learning Strategies* score (M = 85.45, SD = 15.59). The Levene's test was not significant (p = .858), and there was not a significant effect of numbers of language spoken on Direct *Language-Learning Strategies* score (F = .1.29, p = .280). Results of ANOVA of differences in total *Direct Language-Learning Strategies* scores according to the number of languages spoken are shown in Table 4-78.

Table 4-78

ANOVA of Differences in Direct Language-Learning Strategy According to Number of Languages Spoken: (N = 233)

Variable	N	Mean Score	*df*	*F*	*p*
Number of Language Spoken			**3**	**1.29**	**.28**
Speaks 1 language	140	85.45			
Speaks 2 languages	66	86.38			
Speaks 3 languages	24	87.21			
Speaks 4 languages	3	21.00			

Years studying the language. Students who studied a language for 6 to 20 years reported the highest total *Direct Language-Learning Strategies* score (M = 88.54, SD = 17.71), while those who had studied a language for 3 to 4 years reported the lowest total *Direct Language-Learning Strategies* score (M = 83.89, SD =13.44). The Levene's test was not significant (p = .654) and there was not a significant effect of years spent studying a language on total *Direct Language-Learning Strategies* score (F= .747, p = .561). Results of ANOVA of differences in total *Direct Language-Learning Strategies* scores according to years studied a language in Table 4-79.

Table 4-79

ANOVA of Differences in Total Direct Language-Learning Strategy Scores According to Years Studied a Language: (N = 236)

Variable	**N**	**Mean Score**	***df***	***F***	***p***
Years Studying a language			**4**	**.747**	**.56**
0 to 1	67	87.43			
1.5 to 2.5	40	86.35			
3 to 4	56	83.89			
4.5 to 5.5	36	84.14			
6 to 20	37	88.54			

Metacognitive Language-Learning Strategy Use

Gender. The English-speaking college students learning a romance language, females had significantly higher *Metacognitive Language-Learning Strategies* scores (M= 28.57, SE = .57) than did their male counterpart (M= 26.55, SE = .82, t(248) = -2.01, p = .05). There was a significant difference between the *Metacognitive* l *Language-*

Learning Strategies use of male and female respondents. The difference in the *Metacognitive Language-Learning Strategies* scores according to male and female English-speaking college students learning a romance language is displayed in Table 4-80.

Table 4-80

Difference of Metacognitive Language-Learning Strategies According to Gender

Group and Variable	N	Mean	Mean Difference	*t*-value	*p*-value
Male	80	26.55	-2.02	-2.01	.05
Female	170	28.57			

Age. For the total sample, respondents who were 18 years old reported the highest total *Metacognitive Language-Learning Strategies* score ($M = 29.96$, SD = 7.74), while those who were 21 years old reported the lowest total *Metacognitive Language-Learning Strategies* score ($M = 25.04$, $SD = 7.62$). The Levene's test statistic was not significant ($p = .957$). However, there was a trend relationship between age and the total *Metacognitive Language-Learning Strategies* score ($F = 2.12$, $p = .064$). The results of ANOVA of differences in total *Metacognitive Language-Learning Strategies* score according to the age of English-speaking college students learning a romance language are displayed in Table 4-81.

Table 4-81

ANOVA of Differences in the Metacognitive Language-Learning Strategy Score According to Age (N = 250)

Variable	N	Mean Score	*df*	*F*	*p*
Age			**5**	**2.12**	**.06**
18	23	29.96			
19	50	28.60			
20	57	28.70			
21	49	25.04			
22	25	27.12			
23 and over	43	28.21			

College grade level. For the total sample, freshmen reported the highest total *Metacognitive Language-Learning Strategies* score (M = 30.38, SD = 7.08) and seniors reported the lowest total *Metacognitive Language-Learning Strategies* score (M = 26.28, SD =7.51). The Levene's test statistic was also not significant (p = .819) for college grade level. College grade level had a significant effect on the total *Metacognitive Language-Learning Strategies* score (F = 2.66, p = .049). The results of the differences in total *Metacognitive Language-Learning Strategies* scores according to the college grade level of English-speaking college students learning a romance language are displayed in Table 4-82.

Table 4-82

ANOVA of Differences in Total Metacognitive Language-Learning Strategy Score According to College Level: (N = 249)

Variable	N	Mean Score	Mean Difference	*df*	*F*	*p*	Post Hoc Comparisons	
							p LSD	*p* Scheffe
College Grade Level				**3**	**2.66**	.05		
Freshman	45	30.38						
Sophomore	65	27.63						
Junior	81	27.80						
Senior	58	26.28						
Senior> Freshman			4.10				.01	.05

College major. For the total sample, the English-speaking college students who reported a major in Management had the highest total *Metacognitive Language-Learning Strategies* score (M = 31.80, SD = 7.50), while those respondents who reported Humanities, Social Science, Education, and Human Development as a major had the lowest total *Metacognitive Language-Learning Strategies* score (M = 27.32, SD = 7.46). The Levene's test statistic was not significant (p = .710). There was not a significant effect of college major on *Metacognitive Language-Learning Strategies* score ($F = 1.63$, p = .153). The results of ANOVA of difference in total *Metacognitive Language-Learning Strategies score* according to the college major of English-speaking college students learning a romance language is displayed in Table 4-83.

Table 4-83

ANOVA of Differences in Total Metacognitive Language-Learning Strategy According to College Major (N = 251)

Variable	N	Mean *Metacognitive* LLS	*df*	*F*	*p*
College Major			**5**	**1.63**	**.15**
Undecided	14	31.64			
Humanities, Social Science, Education & Human Development	198	27.32			
Health & Human Services	6	29.33			
IT, Engineering, & Science	10	29.20			
Management	10	31.80			
The Arts	13	28.08			

Race. English-speaking college students classified as American Indian or Alaska Native, Native Hawaiian or other Pacific Islander (4), had the highest total *Metacognitive Language-Learning Strategies* score (M = 31.40, SD = 5.60). English-speaking college students classified as Asian (3) reported the lowest total *Metacognitive Language-Learning Strategies* score (M = 25.88, SD = 7.85). The Levene's test was not significant (p = .941) and there was not a significant effect of race on total *Metacognitive Language-Learning Strategies* score (F = .589, p = .671). Results of the difference of the total *Metacognitive Language-Learning Strategies score* according to race are presented in Table 4-84.

Table 4-84

ANOVA of Differences in Total Metacognitive Language-Learning Strategy Score According to Race: (N = 244)

Variable	N	Mean Score	*df*	*F*	*p*
Race			**4**	**.589**	**.67**
White	204	27.87			
Black	21	28.33			
Asian	8	25.88			
American Indian or Alaska Native, Native Hawaiian or other Pacific Islander	5	31.40			
Other	6	30.17			

Ethnicity. Hispanic or Latino English-speaking college students learning a romance language had higher total *Metacognitive Language-Learning Strategies* scores (M= 28.73, SE = 1.89) than Non-Hispanic or Non-Latino students learning a romance language (M= 27.98, SE = .515 $t(218) = .326$, $p > .05$). However, there was not a significant difference in total *Metacognitive Language-Learning Strategies* use scores between Non-Hispanic or Non-Latino and Hispanic or Latino respondents. The difference in the total *Metacognitive* language-learning strategy scores between Non-Hispanic or Non-Latino and Hispanic or Latino English-speaking college students learning a romance language are displayed in Table 4-85.

Table 4-85

Differences in Metacognitive Language-Learning Strategies According to Ethnicity

Group and Variable	N	Mean	Mean Difference	*t*-value	*p*-value
Total LLS					
Non-Hispanic or Non-Latino	209	27.98			
			.746	.326	.745
Hispanic or Latino	11	28.73			

Number of languages spoken. For the total sample, students who spoke four or more languages reported the highest total *Metacognitive Language-Learning Strategies* score (M = 36.33, SD = 7.77) and students who spoke one language reported the lowest *Metacognitive Language-Learning Strategies* score (M = 26.96, SD = 6.88). The Levene's test was not significant (p = .091); however, there was a significant effect between the numbers of languages spoken on *Metacognitive Language-Learning Strategies* scores (F = 2.96, p = .033). Results of ANOVA of differences in total *Metacognitive Language-Learning Strategies* scores according to the number of language spoken are shown in Table 4-86.

Table 4-86

ANOVA of Differences in Metacognitive Language-Learning Strategy score According to Number of Language Spoken: (N = 243)

Variable	N	Mean Score	Mean Difference	*df*	*F*	*p*	Post Hoc Comparisons	
							p LSD	*p* Scheffe
Number of Languages Spoken				3	2.9	.03		
Speaks 1 language	146	26.96						
Speaks 2 languages	69	29.04						
Speaks 3 languages	25	29.32						
Speaks 4 languages or more	3	36.33						
Speaks 1 language > Speaks 2 languages			2.09				.05	ns
Speaks 1 language > Speaks 4 languages or more			9.37				.03	ns

Years studying the language. Students who studied a language for 6 to 20 years reported the highest total *Metacognitive Language-Learning Strategies* score ($M = 29.18$, $SD = 8.11$), while those who had studied a language for 4.5 to 5.5 years reported the lowest total *Metacognitive Language-Learning Strategies* score ($M = 26.82$, $SD = 8.43$). Levene's test was not significant ($p = .284$) and there was not a significant effect of years spent studying a language on total *Metacognitive Language-Learning Strategies* score ($F = .592$, $p = .669$). The results of ANOVA of differences in total *Metacognitive Language-Learning Strategies* scores according to years studied a language is presented in Table 4-87.

Table 4-87

ANOVA of Differences in Total Metacognitive Language-Learning Strategy Scores According to Years Studied a Language: (N = 247)

Variable	N	Mean Score	*df*	*F*	*p*
Years Studying a Language			**4**	**.592**	**.67**
0 to 1	70	27.46			
1.5 to 2.5	43	28.40			
3 to 4	57	27.93			
4.5 to 5.5	38	26.82			
6 to 20	39	29.18			

Affective Language-Learning Strategy Use

Gender. Female English-speaking college students learning a romance language had slightly higher *Affective Language-Learning Strategies* scores (M= 14.90, SE = .32) than did their male counterpart (M= 14.41, SE = .42, $t(245) = -.91$, $p > .05$). There was not a significant difference of *Affective Language-Learning Strategies* use between Male and Female English-speaking college students. The difference in the *Affective Language-Learning Strategies* scores between male and female English-speaking college students learning a romance language is displayed in Table 4-88.

Table 4-88

Difference in Affective Language-Learning Strategies Scores According to Gender

Group and Variable	N	Mean	Mean Difference	*t*-value	*p*-value
Male	80	14.41	-.49	-.91	.36
Female	167	14.90			

Age. For the total sample, respondents who were 20 years old reported the highest *Affective Language-Learning Strategies* (M = 15.55, SD = 4.21), while those who were 21 years old reported the lowest *Affective Language-Learning Strategies* (M = 13.75, SD = 4.02). The Levene's test statistic was not significant (p = .148), indicating there was not a violation of homogeneity of variances. There was not a significant effect of age on *Affective Language-Learning Strategies* (F= 1.56, p = .174). Results of ANOVA of differences in total *Affective Language-Learning Strategies* scores according to the age of English-speaking college students learning a romance language is shown in Table 4-89.

Table 4-89

ANOVA of Differences in Total Affective Language-Learning Strategies Scores According to Age (N = 244)

Variable	N	Mean Score	*df*	*F*	*p*
Age			**5**	**1.56**	**.17**
18	23	14.35			
19	50	15.36			
20	56	15.55			
21	48	13.75			
22	25	13.96			
23 and over	42	14.86			

College grade level. For the total sample, sophomores reported the highest total *Affective Language-Learning Strategies* score (M = 15.50, SD = 4.07) and seniors reported the lowest total *Affective Language-Learning Strategies* score (M = 13.88, SD =3.07). The Levene's test statistic was not significant (p = .130) for college grade level. College grade level did not have a significant effect on the total *Affective Language-Learning Strategies* score (F = 1.68, p = .171). Results of the difference in total *Affective Language-Learning Strategies* scores according to the college grade level of English-speaking college students learning a romance language is displayed in Table 4-90.

Table 4-90

ANOVA of Differences in Total Affective Language-Learning Strategies Scores According to College Grade Level: (N = 246)

Variable	N	Mean Score	*df*	*F*	*p*
College Grade Level			**3**	**1.68**	**.17**
Freshman	45	14.76			
Sophomore	64	15.50			
Junior	80	14.66			
Senior	57	13.88			

College major. For the total sample, English-speaking college students who reported a major in Management had the highest total *Affective Language-Learning Strategies* score (M = 15.40, SD = 3.47), while those respondents who reported IT, Engineering, and Science as a major had the lowest total *Affective Language-Learning Strategies* score (M = 13.56, SD = 4.95). The Levene's test statistic was not significant (p = .800). There was not a significant effect of college major on *Affective Language-Learning Strategies* score (F = *.320*, p = .901). The results of ANOVA of difference in total *Affective Language-Learning Strategies score* according to the college major of English-speaking college students learning a romance language is displayed in Table 4-91.

Table 4-91

ANOVA of Differences in Total Affective Language-Learning Strategy According to College Major (N = 248)

Variable	N	Mean Score	*df*	*F*	*p*
College Major			**5**	**.320**	**.90**
Undecided	14	15.21			
Humanities, Social Science, Education & Human Development	196	14.74			
Health & Human Services	6	15.17			
IT, Engineering, & Science	9	13.56			
Management	10	15.40			
The Arts	13	14.15			

Race. English-speaking college students classified as Black (2), had the highest total *Affective Language-Learning Strategies* score (M = 15.05, SD = 4.76). English-speaking college students classified as Other (6) reported the lowest total *Affective Language-Learning Strategies* score (M = 13.33, SD = 3.93). The Levene's test was not significant (p = .150), and there was not a significant effect of race on total *Affective Language-Learning Strategies* score (F = .468, p = .759). Results of the ANOVA of difference of the total *Affective Language-Learning Strategies score* according to race are presented in Table 4-92.

Table 4-92

ANOVA of Differences in Total Affective Language-Learning Strategy Score According to Race: (N = 241)

Variable	N	Mean Score	*df*	*F*	*p*
Race			**4**	**.468**	**.76**
White	203	14.89			
Black	19	15.05			
Asian	8	13.75			
American Indian or Alaska Native, Native Hawaiian or other Pacific Islander	5	13.80			
Other	6	13.33			

Ethnicity. Hispanic or Latino English-speaking college students learning a romance language had higher total *Affective Language-Learning Strategies* scores (*M*= 15.46, *SE* = 1.28) than Non-Hispanic or Non-Latino students learning a romance language (*M*= 14.80, S*E* =. 277 *t*(215) = . .533, $p > .05$). However, there was not a significant difference in total *Affective Language-Learning Strategies* use scores between Non-Hispanic or Non-Latino and Hispanic or Latino respondents. The difference in the total *Affective Language-Learning Strategies* scores between Non-Hispanic or Non-Latino and Hispanic or Latino English-speaking college students learning a romance language are illustrated in Table 4-93.

Table 4-93

Differences in Affective Language-Learning Strategy Use According to Ethnicity

Group and Variable	N	Mean	Mean Difference	*t*-value	*p*-value
Non-Hispanic or Non-Latino	206	14.80			
			.658	.533	.594
Hispanic or Latino	11	15.46			

Number of languages spoken. For the total sample, students who speak four or more languages reported the highest total *Affective Language-Learning Strategies* score (M = 20.00, SD = 5.29) and students who speak two languages reported the lowest *Affective Language-Learning Strategies* score (M = 14.28, SD = 4.39). The Levene's test was not significant (p = .148) and there was not a significant effect of *numbers of languages spoken* on *Affective Language-Learning Strategies* (F = 2.20, p = .088). The results of ANOVA of differences in total *Affective Language-Learning Strategies* scores according to the number of languages spoken are shown in Table 4-94.

Table 4-94

ANOVA of Differences in Affective Language Learning Strategy According to Number of Language Spoken: (N = 241)

Variable	N	Mean Score	*df*	*F*	*p*
Number of Languages Spoken			**3**	**2.20**	**.09**
Speaks 1 language	145	14.75			
Speaks 2 languages	69	14.28			
Speaks 3 languages	24	14.63			
Speaks 4 languages	3	20.00			

Years studying the language. Students who studied a language for 4.5 to 5.5 years reported the highest total *Affective Language-Learning Strategies* score (M = 15.58, SD = 4.99), while those who had studied a language for three to four years reported the lowest total *Affective Language-Learning Strategies* score (M = 14.26, SD =3.72). The Levene's test was not significant (p = .077), and there was not a significant effect of years spent studying a language on total *Affective Language-Learning Strategies* score (F= .781, p = .539). The results of ANOVA of differences in total *Affective Language-Learning Strategies* scores according to years studied a language in Table 4-95.

Table 4-95

ANOVA of Differences in Total Affective Language-Learning Strategy Scores According to Years Studied a Language: (N = 244)

Variable	N	Mean Score	*df*	*F*	*p*
Years Studying a Language			**4**	**.781**	**.54**
0 to 1	70	14.71			
1.5 to 2.5	42	15.07			
3 to 4	57	14.26			
4.5 to 5.5	38	15.58			
6 to 20	37	14.35			

Social Language-Learning Strategy Use

Gender. Female English-speaking college students learning a romance language had significantly higher *Social Language-Learning Strategies* scores (M= 20.24, SE = .40) than did their male counterpart (M= 17.96, SE = .60, $t(247) = -3.16$, $p < .05$). The difference in the total *Social Language-Learning Strategies* scores between male and female English-speaking college students learning a romance language is displayed in Table 4-96.

Table 4-96

Comparison of Social Language-Learning Strategies According to Gender

Group and Variable	N	Mean	Mean Difference	*t*-value	*p*-value
Male	80	17.96	-2.27	-3.16	.00
Female	169	20.24			

Age. For the total sample, respondents who were 18 years old reported the highest total *Social Language-Learning Strategies* score (M = 21.26, SD = 5.40), while those who were 22 years old reported the lowest total *Social Language-Learning Strategies* score (M = 17.71, SD = 5.25). The Levene's test statistic was not significant (p = .783). There was not a significant effect of age on the total *Social Language-Learning Strategies* score (F= 1.45, p = .208). The results of ANOVA of differences in total *Social Language-Learning Strategies* scores according to the age of English-speaking college students learning a romance language is shown in Table 4-97.

Table 4-97

ANOVA of Differences in Total Social Language-Learning Strategy Score According to Age (N = 246)

Variable	N	Mean Score	*df*	*Welch F*	*p*
Age			**5**	**1.45**	**.21**
18	23	21.26			
19	50	20.18			
20	57	19.63			
21	49	18.63			
22	24	17.71			
23 and over	43	19.35			

College grade level. For the total sample, freshmen reported the highest total *Social Language-Learning Strategies* score (M = 20.31, SD = 5.08) and seniors reported the lowest total *Social Language-Learning Strategies* score (M = 17.85, SD =5.41). The Levene's test statistic was not significant (p = .637) for college grade level. There was a trend relationship between college grade level and the total *Social Language-Learning*

Strategies score (F = 2.48, p = .062). The results of the difference in total *Social Language-Learning Strategies* scores according to the college grade level of English-speaking college students learning a romance language is displayed in Table 4-98.

Table 4-98

ANOVA of Differences in Social Language-Learning Strategy Score According to College Grade Level: (N = 248)

Variable	N	Mean Score	*df*	*F*	*p*
College Grade Level			**3**	**2.48**	**.06**
Freshman	45	20.31			
Sophomore	65	19.72			
Junior	80	20.01			
Senior	58	17.85			

College major. For the total sample, English-speaking college students who reported a major in Management had the highest total *Social Language-Learning Strategies* score (M = 21.80, SD = 5.87), while those respondents who reported IT, Engineering, and Science as a major had the lowest total *Social Language-Learning Strategies* score (M = 18.20, SD = 4.98). The Levene's test statistic was not significant (p = .996). There was not a significant effect of college major on *Social Language-Learning Strategies* score (F = .877, p = .497). The results of ANOVA of differences in total *Social Language-Learning Strategies score* according to the college major of English-speaking college students learning a romance language are displayed in Table 4-99.

Table 4-99

ANOVA of Differences in Total Social Language-Learning Strategy According to College Major (N = 250)

Variable	N	Mean Score	*df*	*F*	*p*
College Major			**5**	**.877**	**.50**
Undecided	14	20.57			
Humanities, Social Science, Education & Human Development	197	19.26			
Health & Human Services	6	19.83			
IT, Engineering, & Science	10	18.20			
Management	10	21.80			
The Arts	13	21.00			

Race. English-speaking college students classified as "Other" had the highest total *Social Language-Learning Strategies* score (M = 22.00, SD = 8.27). English-speaking college students classified as Black (2) reported the lowest total *Social Language-Learning Strategies* score (M = 19.24, SD = 4.56). The Levene's test was not significant (p = .312), and there was not a significant effect of race on total *Social Language-Learning Strategies* score (F = .526, p = .717). Results of the ANOVA of difference of the total *Social Language-Learning Strategies score* according to race are presented in Table 4-100.

Table 4-100

ANOVA of Differences in Social Language-Learning Strategy Score According to Race: (N = 243)

Variable	N	Mean Score	*df*	*F*	*p*
Race			**4**	**.526**	**.72**
White	203	19.44			
Black	21	19.24			
Asian	8	19.38			
American Indian or Alaska Native, Native Hawaiian or other Pacific Islander	5	21.60			
Other	6	22.00			

Ethnicity. Non-Hispanic or Non-Latino English-speaking college students learning a romance language had slightly higher total *Social Language-Learning Strategies* scores (M= 19.75, SE = .368) Hispanic or Latino students than learning a romance language (M= 19.00, SE = 2.05 $t218$) = -.452, $p > .05$). However, there was not a significant difference in total *Social Language-Learning Strategies* use scores between Non-Hispanic or Non-Latino and Hispanic or Latino respondents. The difference in the total *Social Language-Learning Strategies* scores between Non-Hispanic or Non-Latino and Hispanic or Latino English-speaking college students learning a romance language are displayed in Table 4-101.

Table 4-101

Differences in Social Language-Learning Strategies According to Ethnicity

Group and Variable	N	Mean	Mean Difference	*t*-value	*p*-value
Non-Hispanic or Non-Latino	206	19.75			
			-.755	-.452	.652
Hispanic or Latino	11	19.00			

Number of languages spoken. For the total sample, students who speak four or more languages reported the highest total *Social Language-Learning Strategies* score (*M* = 24.00, SD = 6.00) and students who speak 1 language reported the lowest *Social Language-Learning Strategies* score (*M* = 19.01, SD = 5.15). The Levene's test was not significant (*p* = .815) and there was not a significant effect of numbers of language spoken on *Social Language-Learning Strategies* (*F* = .2.35, *p* = .073). The results of ANOVA of differences in total *Social Language-Learning Strategies* scores according to the *number of language spoken* are shown in Table 4-102.

Table 4-102

ANOVA of Differences in Social Language-Learning Strategy According to Number of Language Spoken: (N = 242)

Variable	N	Mean Score	*df*	*F*	*p*
Number of Language Spoken			**3**	**2.35**	**.07**
Speaks 1 language	145	19.01			
Speaks 2 languages	69	19.78			
Speaks 3 languages	25	21.48			
Speaks 4 languages	3	24.00			

Years studying the language. Students who studied a language for 6 to 20 years reported the highest total *Social Language-Learning Strategies* score (M = 20.82, SD = 5.26). Although the mean scores among the other categories were very close, those who had studied a language for 3 to 4 years reported the lowest total *Social Language-Learning Strategies* score (M = 19.23, SD =4.68). The Levene's test was not significant (p = .599), and there was not a significant effect of years spent studying a language on total *Social Language-Learning Strategies* score (F= .658, p = .622). The results of ANOVA of differences in total *Social Language-Learning Strategies* scores according to years studied a language in Table 4-103.

Table 4-103

ANOVA of Differences in Social Language-Learning Strategy Scores According to Years Studied a Language: (N = 246)

Variable	N	Mean Score	*df*	*F*	*p*
Years Studying a Language			**4**	**.658**	**.62**
0 to 1	70	19.34			
1.5 to 2.5	43	19.33			
3 to 4	56	19.23			
4.5 to 5.5	38	19.26			
6 to 20	39	20.82			

Total Indirect Language-Learning Strategies Use

Gender. Female students learning a romance language had significantly higher *Indirect Language-Learning Strategies* scores (M= 63.45, SE = 1.11) than did their male counterpart (M= 58.93, SE = 1.59, $t(244)$ = -2.31, $p < .05$). There was a significant difference in the total of *Indirect Language-Learning Strategies* use of male and female

respondents. The difference in the total *Indirect Language-Learning Strategies* scores between male and female English-speaking college students learning a romance language is displayed in Table 4-104.

Table 4-104

Differences in Indirect Language-Learning Strategy Use According to Gender

Group and Variable	N	Mean	Mean Difference	*t*-value	*p*-value
Male	80	58.93	-4.52	-2.31	.02
Female	166	63.45			

Age. For the total sample, respondents who were 18 years old reported the highest *Indirect Language-Learning Strategies* (M = 65.57, SD = 15.77), while those who were 20 years old reported the lowest *Indirect Language-Learning Strategies* (M = 57.31, SD = 15.50). The Levene's test statistic was not significant (p = .873), and there was a trend relationship between age and *Indirect Language-Learning Strategies* (F= 1.93, p = .091). The results of ANOVA of differences in total *Indirect Language-Learning Strategies* scores according to the age of English-speaking college students learning a romance language is shown in Table 4-105.

Table 4-105

ANOVA of Differences in Total Indirect Language-Learning Strategy According to Age (N = 243)

Variable	N	Mean Score	*df*	*Welch F*	*p*
Age			**5**	**1.75**	**.09**
18	23	65.57			
19	50	64.14			
20	56	63.46			
21	48	57.31			
22	24	58.42			
23 and over	42	62.05			

College grade level. For the total sample, those who were freshmen reported the highest total *Indirect Language-Learning Strategies* score (M = 65.44, SD = 14.43), while those who were seniors reported the lowest total *Indirect Language-Learning Strategies* score (M = 57.67, SD = 13.60). The Levene's test statistic was also not significant for college grade level (p = .702). The results for the ANOVA indicated a significant effect of college grade level on total *Indirect Language-Learning Strategies* score (F = 2.63, p = .051). The results of ANOVA of differences in total *Indirect Language-Learning Strategies* score according to college level are shown in Table 4-106.

Table 4-106

ANOVA of Differences in Total Indirect Language-Learning Strategy According to College Grade Level: (N = 245)

Variable	N	Mean Score	Mean Difference	*df*	*F*	*p*	Post Hoc Comparisons	
							p LSD	*p* Scheffe
College Grade Level				3	2.6	.05		
Freshman	45	65.44						
Sophomore	64	62.47						
Junior	79	62.37						
Senior	57	57.67						
Senior> Freshman			7.77				.01	ns

College major. For the total sample, English-speaking college students who reported a major in Management had the highest total *Indirect Language-Learning Strategies* score (M = 69.00, SD = 15.03), while those respondents who reported IT, Engineering, and Science as a major had the lowest total *Indirect Language-Learning Strategies* score (M = 59.22, SD = 17.17). The Levene's test statistic was not significant (p = .586). There was not a significant effect of college major on *Indirect Language-Learning Strategies* score ($F = 1.13, p$ = .348). The results of ANOVA of differences in total *Indirect Language-Learning Strategies score* according to the college major of English-speaking college students learning a romance language are displayed in Table 4-107.

Table 4-107

ANOVA of Differences in Total Indirect Language-Learning Strategies Scores According to College Major (N = 247)

Variable	N	Mean Score	*df*	*F*	*p*
College Major			**5**	**1.13**	**.35**
Undecided	14	67.43			
Humanities, Social Science, Education & Human Development	195	61.13			
Health & Human Services	6	64.33			
IT, Engineering, & Science	9	59.22			
Management	10	69.00			
The Arts	13	63.23			

Race. English-speaking college students classified as American Indian, Alaska Native, Native Hawaiian, or other Pacific Islander (4), had the highest total *Indirect Language-Learning Strategies* score (M = 66.80, SD = 8.59). English-speaking college students classified as Asian (3) reported the lowest total *Indirect Language-Learning Strategies* score (M = 59.00, SD = 17.84). The Levene's test was not significant (p = .481), and there was not a significant effect of race on total *Indirect Language-Learning Strategies* score (F = .313, p = .869). Results of the ANOVA of difference of the total *Indirect Language-Learning Strategies score* according to race are presented in Table 4-108.

Table 4-108

ANOVA of Differences in Total Indirect Language-Learning Strategies Scores According to Race: (N = 240)

Variable	N	Mean Score	*df*	*F*	*p*
Race			**4**	**.313**	**.87**
White	202	62.04			
Black	19	61.74			
Asian	8	59.00			
American Indian or Alaska Native, Native Hawaiian or other Pacific Islander	5	66.80			
Other	6	65.50			

Ethnicity. Hispanic or Latino English-speaking college students learning a romance language had higher total *Indirect Language-Learning Strategies* scores (M=63.18, SE = 4.65) Non-Hispanic or Non-Latino students than learning a romance language (M= 62.34, SE = 1.01 $t(215) = .188$, $p > .05$). There was not a significant difference in total *Indirect Language-Learning Strategies* use scores between Non-Hispanic or Non-Latino and Hispanic or Latino respondents. The difference in the total *Indirect Language-Learning Strategies* scores between Non-Hispanic or Non-Latino and Hispanic or Latino English-speaking college students learning a romance language are displayed in Table 4-109.

Table 4-109

Differences in Total Indirect Language-Learning Strategies According to Ethnicity

Group and Variable	N	Mean	Mean Difference	*t*-value	*p*-value
Total LLS					
Non-Hispanic or Non-Latino	206	62.34			
			.846	.188	.851
Hispanic or Latino	11	63.18			

Total Indirect LLS Use: Language Learning Experience

Number of languages spoken. For the total sample, students who speak four or more languages reported the highest total *Indirect Language-Learning Strategies* score (M = 80.33, SD = 18.01) and students who speak one language reported the lowest total *Indirect Language-Learning Strategies* score (M = 60.48, SD = 12.84). The Levene's test was not significant (p = .096), and there was a significant effect of numbers of language spoken on total *Indirect Language-Learning Strategies* score (F = 2.72, p = .045). The results of ANOVA of differences in total *Indirect Language-Learning Strategies* scores according to the number of language spoken are shown in Table 4-110.

Table 4-110

ANOVA of Differences in Indirect Language-Learning Strategy According to Number of Languages Spoken: (N = 240)

Variable	N	Mean Score	Mean Difference	*df*	*F*	*p*	Post Hoc Comparisons	
							p LSD	*p* Scheffe
Number of Languages Spoken				**3**	**2.72**	**.05**		
Speaks 1 language	144	60.48						
Speaks 2 languages	69	63.10						
Speaks 3 languages	24	64.92						
Speaks 4 languages or more	3	80.33						
Speaks 4 languages > Speaks 1 language			19.85				.02	ns
Speaks 4 languages > Speaks 2 languages			17.23				.04	ns

Years studying the language. Students who studied a language for 6 to 20 years reported the highest total *Indirect Language-Learning Strategies* score (M = 64.03, SD = 14.76), while those who had studied a language for 3 to 4 years reported the lowest total *Indirect Language-Learning Strategies* score (M = 61.29, SD =12.14). The Levene's test was not significant (p = .329), and there was not a significant effect of years spent studying a language on total *Indirect Language-Learning Strategies* score (F= .239, p = .916). The results of ANOVA of differences in total *Indirect Language-Learning Strategies* scores according to years studied a language in Table 4-111.

Table 4-111

ANOVA of Differences in Total Indirect Language-Learning Strategy Scores According to Years Studied a Language: (N = 243)

Variable	N	Mean Score	*df*	*F*	*p*
Years Studying a Language			**4**	**.239**	**.92**
0 to 1	70	61.51			
1.5 to 2.5	42	62.21			
3 to 4	56	61.29			
4.5 to 5.5	38	61.66			
6 to 20	37	64.03			

Research Question 4: Explanatory Variables of Language-Learning Strategies

Are demographic characteristics, language-learning experience, and motivation significant explanatory variables of the frequency of use of language-learning strategies (memory, cognitive, compensation, metacognitive, affective, and social) of English-speaking college students learning a romance language?

Multiple regression analyses with the stepwise method was used to see if demographic characteristics, language-learning experiences, and motivation, were significant explanatory variables of the frequency of use of language-learning strategies (*Memory, Cognitive, Compensation, Metacognitive, Affective,* and *Social*) used by English- speaking college students who are second language learners. Separate

regression analyses were conducted for the total scale, *Direct* and *Indirect Language-Learning Strategies*, and the six individual language-learning strategies.

The VIF and Tolerance for each regression model was examined. The VIF indicates whether a predictor has a strong linear relationship with other predictors. The value should not be greater than 10, and if the value is considerably greater than 1, the regression model may be biased (Field, 2005). The average VIF for all the models was between 1 and 3, while the tolerance statistics (1/VIF) were all greater than .2, thereby indicating collinearity was not a problem (Field, 2005).

Dummy variables were created for categorical variables (gender, ethnicity, race, and college major). Multiple regressions using the stepwise method were conducted. This process consisted of entering the predictors with the highest significant statistic score into the models and continued until only significant predictors remained in the model with non-significant variables excluded from the model (Field, 2005). Categorical variables were converted to dummy variables. A dummy variable was created for the response category. For example, two dummy variables were created for gender; the first was coded 0 for males and 1 for females. For race, which had six response categories (White, Black or African American, Asian, American Indian or Alaska Native and Native), five dummy variables were created. For the first race dummy variable, if respondents selected "White" they were coded as 1. For the second race dummy variable, if respondents selected "Black" they were coded as 2. For the third race dummy variable, if respondents selected "Asian" they were coded as 3. For the fourth race dummy variable, if respondents selected "American Indian/Native Hawaiian" they were

coded as 4 and all who selected "Other" were coded as 6. This same process was conducted for the remaining categorical variables ethnicity and practice area.

Total SILL, Direct Strategies, and Indirect Strategies

Total SILL. The stepwise process selected Model 3 as the best explanatory model for predicting the frequency of use of language-learning strategies (total *SILL*). The R^2 was 53.7% for Model 3, and the adjusted R^2 was 53.0%. Analysis of individual predictors indicated a significant explanatory relationship between *Motivational Intensity*, *Desire to Learn a Language*, *College major*, and frequency of total language-learning strategy use. The standardized beta coefficient (β) of the dummy variables indicated their order of significance within the third model. *Motivational Intensity* ($t = 6.45$, $p = .000$, $\beta = .44$) was the most important predictor in the model. *Desire to Learn the Language* was the second most important predictor ($t = 5.17$, $p = .000$, $\beta = .35$). *College majors, IT* ($t = -2.37$, $p = .002$, $\beta = -.12$), was the third and final significant predictor which reported an inverse relationship with the frequency of use of language-learning strategies. The inverse relationship indicated that the greater the frequency of respondents who were IT majors, the lower the frequency of total language-learning strategy use. The results of the regression analysis for RQ4 for the total *SILL* are summarized in Table 4-112.

Table 4-112

Summarized Regression Analysis of the Explanatory Variables of the Total SILL (N=204)

Variable	*F*	*df*	*p*	*B*	*SE/B*	β	*t*	*p*	R^2	Adjusted R^2
Model 1	174.65	1	.000						.464	.461
Model 2	110.52	2	.000						.524	.519
Model 3	77.25	3	.000						.537	.530

(Constant)	16.80	8.72			
Revised Motivational Intensity	3.77	.585	.44	6.45	.00
Total Desire to Learn the Language	2.39	.463	.35	5.17	.00
College Majors, IT	-16.98	7.16	-.12	-2.37	.02

Direct strategies. The stepwise process selected Model 2 as the best explanatory model for predicting the frequency of use of *Direct Language-Learning Strategies* (*Memory, Cognitive, and Compensation Language-Learning Strategies*). The R^2 was 43.8% for Model 2 and the adjusted R^2 was 43.3%. The analysis indicated that *Motivational Intensity* and *Desire to Learn a Language* were significant predictors of the frequency of use of *Direct Language-Learning Strategies*. The standardized beta coefficient (β) of the variables indicated their order of significance in explaining the most frequently used direct language-learning strategies of English-speaking college students learning a romance language. *Motivational Intensity* ($t = 5.42$, $p = .000$, $\beta = .41$) was the most important predictor in the model. *Desire to Learn the Language* was the second most important predictor ($t = 4.13$, $p = .000$, $\beta = .31$). Results of the regression analyses showed *Motivational Intensity* and *Desire to Learn the Language* were significant explanatory variables of the frequency of use of *Direct Language-Learning strategies* among English-speaking college students learning a romance language. The results of the regression analysis for RQ4 for the total *Direct Language-Learning strategies* are summarized in Table 4-113.

Table 4-113

Summarized Regression Analysis of Explanatory Variables of the Frequency of Use of Direct Language-Learning Strategies (N=207)

Variable	*F*	*df*	*p*	*B*	*SE/B*	β	*t*	*p*	R^2	Adjusted R^2
Model 1	131.95	1	.000						.392	.389
Model 2	79.64	2	.000						.438	.433
(Constant)				20.27	5.25					
Revised Motivational Intensity				1.91	.354	.41	5.41	.00		
Total Desire to Learn the Language				1.15	.280	.31	4.13	.00		

Indirect strategies. The stepwise method was used, producing three models. The stepwise process selected Model 3 as the best explanatory model for predicting the frequency of use of *Indirect Language-Learning Strategies* (*Metacognitive, Affective, and Social Language-Learning Strategies*). The R^2 was 53.7% for Model 3 and the adjusted R^2 was 53.0%. The analysis indicated that *Motivational Intensity*, *Desire to Learn the Language,* and *college majors (IT)* were significant predictors of the frequency of use of *Indirect Language-Learning Strategies*. The standardized beta coefficient (β) of the variables indicated their order of significance in explaining the most frequently used *Indirect Language-Learning Strategies* of English-speaking college students learning a romance language. *Motivational Intensity* (t = 6.48, p = .000, β = .44) was the most important predictor in the model. *Desire to Learn the Language* was the second most important predictor (t = 5.11, p = .000, β = .35). The third and last significant predictor, college major IT displayed an inverse relationship with the frequency of use of *Indirect Language-Learning Strategies* (t = -3.06, p = .003, β = -.15). This indicates that the

greater the frequency of respondents who were IT majors, the lower the *frequency of Indirect Language-Learning Strategies* use.

Results of the regression analyses displayed *Motivational Intensity, Desire to Learn the Language, and college major IT* were significant explanatory variables of the frequency of use of *Indirect Language-Learning Strategies* among English-speaking college students learning a romance language. The results of the regression analysis for RQ4 for the total *Indirect Language-Learning Strategies* are summarized in Table 4-114.

Table 4-114

Summarized Regression Analysis of Explanatory Variables of the Frequency of Use of Indirect Language-Learning Strategies (N=210)

Variable	*F*	*df*	*p*	*B*	*SE/B*	β	*t*	*p*	R^2	Adjusted R^2
Model 1	177.24	1	.000						.460	.457
Model 2	110.46	2	.000						.516	.512
Model 3	79.72	3	.000						.537	.530
(Constant)				-2.83	4.27					
Revised Motivational Intensity				1.88	.291	.44	6.48	.00		
Total Desire to Learn the Language				1.18	.231	.35	5.11	.00		
College Majors (IT)				-11.01	3.60	-.146	-3.06	.00		

Memory Language-Learning Strategies

RQ$_{4a}$ *Are demographic characteristics, language-learning experiences, and motivation, significant explanatory variables of the frequency with which memory language-learning strategies are used by English-speaking college students learning a romance language?*

Model 4 was selected as the best explanatory model for predicting the frequency of use of *Memory Language-Learning Strategies*. The R^2 was 36.4% for Model 4 and the adjusted R^2 was 35.2%. Analysis of demographic characteristics, language learning experience, and motivation, indicated that *Motivational Intensity, Gender (Female) Years studying the language,* and *language number* were significant explanatory variables of the frequency of use of *Memory Language-Learning Strategies* by English-speaking colleges students learning a romance language. The standardized beta coefficient (β) of the four predictors indicated their order of importance in explaining the frequency of use of memory strategies. *Motivational Intensity* was the most important predictor (t = 9.57, p = .000, β = .56) of respondents' frequency of use of memory strategies. *Gender (Female)* (t =2.48, p = .014, β = .14) was the second most important predictor in explaining the frequency of use of memory strategies. The third significant predictor was *years studying the language* (t = -2.43, p = .016, β = *-.14*), which displayed an inverse relationship with the frequency of use of memory strategies among English-speaking colleges students learning a romance language. As the years studying a language decreased, the reported use of memory strategies increased among respondents. The fourth and last significant predictor was *language number,* (t = -2.05, p = .042, β = -.12) which indicated the higher the number of languages respondents knew, the fewer the usage of *Memory Language-Learning Strategies.* The other variables were excluded from the regression model as explanatory variables.

The results of the regression analysis showed *Motivational Intensity, Gender (Female), Years studying the language,* and *language number* were explanatory variables of the frequency of use of *Memory Language-Learning Strategies* among English-

speaking college students learning a romance language. The results of the regression analysis for RQ4 for *Memory Language-Learning Strategies* are summarized in Table 4-115.

Table 4-115

Summarized Regression Analysis of Explanatory Variables of Memory Language-Learning Strategies (N=212)

Variable	*F*	*df*	*p*	*B*	*SE/ B*	β	*t*	*p*	R^2	Adjusted R^2
Model 1	92.21	1	.000						.305	.302
Model 2	51.49	2	.000						.330	.324
Model 3	37.52	3	.000						.351	.342
Model 4	29.62	4	.000						.364	.352
(Constant)				6.40	2.12					
Motivational Intensity				1.02	.107	.56	9.57	.00		
Gender (Female)				1.87	.754	.14	2.48	.01		
Years study the Language				-.344	.141	-.14	-2.43	.02		
Language Number				-1.00	.489	-.12	-2.05	.04		

Cognitive Language Learning Strategies

RQ$_{4b}$ *Are demographic characteristics, language-learning experiences, and motivation, significant explanatory variables of the frequency with which cognitive language-learning strategies are used by English-speaking college students learning a romance language?*

The regression analysis conducted produced four models. Model 4 was selected as the best explanatory model for predicting the frequency of use of *Cognitive Language-Learning Strategies*. The R^2 was 51.2% for Model 4 and the adjusted R^2 was 50.3%. The

analysis indicated *Desire to Learn the Language, Motivational Intensity, Race (Asian),* and *Race (Hawaiian)* were significant predictors of the frequency of use of *Cognitive Language-Learning Strategies* among English-speaking college students learning a romance language. The standardized beta coefficient (β) of the four predictors indicated their order of importance in explaining the frequency of use of *Memory Language-Learning Strategies*. *Desire to Learn the Language* was the most important predictor (t = 5.47, p = .000, β = .39) of the frequency of use of *Cognitive* strategies. *Motivational Intensity* (t =5.00, p = .000, β = .35) was the second most important predictor in explaining the frequency of use of *Cognitive Language-Learning Strategies*. The third predictor *race (Asian)* (t = -2.96, p = .003, β = *-.14*) had an inverse relationship indicated the more respondents who were Asian, the lower the frequency of *Cognitive Language-Learning Strategies*. The fourth and last predictor *race (Hawaiian)* (t = -2.29, p = .023, β = -.11) *also* reported an inverse relationship, which indicated the higher the amount of respondents who were Hawaiian the lower the frequency of *Cognitive Language-Learning Strategies* use.

The results of the regression analysis showed *Desire to Learn the Language, Motivational Intensity, Race (Asian),* and *Race (Hawaiian)* were explanatory variables of the frequency of use of *Cognitive Language-Learning Strategies* among English-speaking college students learning a romance language. The results of the regression analysis for RQ4 for *Cognitive Language-Learning Strategies* are summarized in Table 4-116.

Table 4-116

Summarized Regression Analysis of Explanatory Variables of Cognitive Language-Learning Strategies (N=213)

Variable	*F*	*df*	*p*	*B*	*SE/ B*	β	*t*	*p*	R^2	Adjusted R^2
Model 1	153.46	1	.000						.421	.418
Model 2	96.92	2	.000						.480	.475
Model 3	69.59	3	.000						.500	.493
Model 4	54.57	4	.000						.512	.503
(Constant)				3.90	2.76					
Tot Desire to Learn the Language				.823	.150	.39	5.47	.00		
Motivational Intensity				.946	.189	.35	5.00	.00		
Race (Asian)				-6.89	2.33	-.14	-2.96	.00		
Race (Hawaiian)				-8.64	3.77	-.11	-2.29	.02		

Compensation Language-Learning Strategies

RQ4c *Are demographic characteristics, language-learning experiences, and motivation, significant explanatory variables of the frequency with which compensation language-learning strategies are used by English-speaking college students learning a romance language?*

Model 2 was selected through the stepwise process, as the best explanatory model for predicting the frequency of use of *Compensation Language-Learning Strategies*. The R^2 was 7.5% for Model 2 and the adjusted R^2 was 6.6%. Analysis of demographic characteristics, language-learning experience, and motivation, indicated that *Motivational Intensity and College major (Management)* were significant predictors of the frequency of use of compensation language-learning strategies among English-speaking colleges students learning a romance language. The standardized beta coefficient (β) of the two

predictors indicated their order of importance in explaining the frequency of use of *Compensation* strategies. *Motivational Intensity* was the most important predictor (t = 3.06, p = .002, β = .21) of the frequency of use of compensation language-learning strategies. *College majors (Management)* was the second most important predictor (t =2.59, p = .010, β = .17) in explaining the frequency of use of *Compensation Language-Learning Strategies*. The other variables were excluded from the regression model as explanatory variables. The results of the regression analysis for RQ4 for *Compensation Language-Learning Strategies* are summarized in Table 4-117.

Table 4-117

Summarized Regression Analysis of Explanatory Variables of Compensation Language-Learning Strategies (N=210)

Variable	*F*	*df*	*p*	*B*	*SE/B*	β	*t*	*p*	R^2	Adjusted R^2
Model 1	9.77	1	.002						.045	.040
Model 2	8.37	2	.000						.075	.066
(Constant)				12.95	1.66					
Motivational Intensity				.246	.080	.21	3.06	.00		
College Majors (Management)			.	3.26	1.26	.17	2.59	.01		

Metacognitive Language-Learning Strategies

RQ$_{4d}$ *Are demographic characteristics, language-learning experiences, and motivation, significant explanatory variables of the frequency with which metacognitive language-learning strategies are used by English-speaking college students learning a romance language?*

The stepwise method selected Model 4 as the best explanatory model for predicting the frequency of use of *Metacognitive Language-Learning Strategies*. The R^2 was 62.5% for Model 4 and the adjusted R^2 was 61.7%. Analysis of demographic characteristics, language-learning experience, and motivation, indicated that *Motivational Intensity, Desire to Learn the Language, Attitudes Toward Learning the Language,* and *College majors IT* were significant explanatory variables of the frequency of use of *Metacognitive Language-Learning Strategies* by English-speaking college students learning a romance language. The standardized beta coefficient (β) of the four predictors indicated their order of importance in explaining the usage of *Metacognitive Language-Learning Strategies*. *Motivational Intensity* was the most important predictor (t = 6.89, p = .000, β = .43) of the frequency of use of *Metacognitive Language-Learning Strategies*. *Desire to learn the language* was the second most important predictor (t =3.94, p = .000, β = .30) in explaining the frequency of use of *Metacognitive Language-Learning Strategies*. *Attitudes Toward Learning the Language* (t =2.19, p = .030, β = .15) *were* the third important predictor in explaining the frequency of use of *Metacognitive Language-Learning Strategies*. The fourth and last predictor was college major IT (t = -2.26, p = .025, β = -.*10*), which displayed an inverse relationship indicated the more respondents who were IT majors, the fewer *Metacognitive Language-Learning Strategies* used. The other variables were excluded from the regression model as explanatory variables.

The results of the regression analysis showed *Motivational Intensity, Desire to Learn the Language, Attitudes Toward Learning the Language,* and *College majors IT* were explanatory variables of the frequency of use of *Metacognitive Language-Learning Strategies* among English-speaking college students learning a romance language. The

results of the regression analysis for RQ4 for *Metacognitive Language-Learning Strategies* are summarized in Table 4-118.

Table 4-118

Summarized Regression Analysis of Explanatory Variables of Metacognitive Language-Learning Strategies (N=213)

Variable	*F*	*df*	*p*	*B*	*SE/B*	β	*t*	*p*	R^2	Adjusted R^2
Model 1	245.37	1	.000						.538	.535
Model 2	163.11	2	.000						.608	.605
Model 3	111.75	3	.000						.616	.610
Model 4	86.54	4	.000						.625	.617
(Constant)				-7.702	1.99					
Motivational Intensity				.952	.138	.44	6.89	.00		
Desire to Learn a Language				.515	.131	.30	3.94	.00		
College Majors (IT)				-3.60	1.59	-.10	-2.26	.03		
Attitudes towards learning a language				.083	.038	.15	2.19	.03		

Affective Language-Learning Strategies

RQ_{4c} *Are demographic characteristics, language-learning experiences, and motivation, significant explanatory variables of the frequency with which affective language-learning strategies are used by English-speaking college students learning a romance language?*

The stepwise method selected Model 2 as the best explanatory model for predicting the frequency of use of *Affective Language-Learning Strategies*. The R^2 was 15.4% for Model 4 and the adjusted R^2 was 14.6%. Analysis of demographic characteristics, language-learning experience, and motivation, indicated that *Motivational*

Intensity, and Race (White) were significant explanatory variables of the frequency of use of *Affective Language-Learning Strategies* by English-speaking college students learning a romance language. The standardized beta coefficient (β) of the two predictors indicated their order of importance in explaining the frequency of use of *Affective Language-Learning Strategies*. *Motivational Intensity* was again the most important predictor (t = 5.89, p = .000, β = .38) of the frequency of use of *Affective Language-Learning Strategies*. *Race (White)* (t =2.14, p = .033, β = .14) was the second most important predictor in explaining the frequency of use of *Affective Language-Learning Strategies*. This indicates the more White respondents in the study the more the higher frequency of use of *Affective Language-Learning Strategies*. The other variables were excluded from the regression model as explanatory variables. The results of the regression analysis showed *Motivational Intensity,* and *Race (White),* were explanatory variables of the frequency of use of *Affective Language-Learning Strategies* among English-speaking college students learning a romance language. The results of the regression analysis for RQ4 for *Affective Language-Learning strategies* are summarized in Table 4-119.

Table 4-119

Summarized Regression Analysis of Explanatory Variables of Affective Language-Learning Strategies (N=211)

Variable	*F*	*df*	*p*	*B*	*SE/B*	β	*t*	*p*	R^2	Adjusted R^2
Model 1	32.74	1	.000						.135	.131
									.154	.146
Model 2	18.95	2	.000							
(Constant)				4.61	1.66					
Motivational Intensity				.438	.074	.38	5.89	.00		
Race (White)				1.45	.678	.14	2.14	.03		

Social Language-Learning Strategies

RQ$_{4f}$ *Are demographic characteristics, language learning experiences, and motivation, significant explanatory variables of the frequency with which social language learning strategies are used by English speaking college students who are second language learners?*

The stepwise method selected Model 3 as the best explanatory model for the frequency of use of *Social Language-Learning Strategies*. The R^2 was 40.5% for Model 3 and the adjusted R^2 was 39.6%. Regression analysis of demographic characteristics, language-learning experience, and motivation, indicated that *Desire to Learn the Language, Motivational Intensity, and College majors (IT)* were significant explanatory variables of the frequency of use of *Social Language-Learning Strategies* by English-speaking colleges students learning a romance language. The standardized beta coefficient (β) of the three predictors indicated their order of importance in explaining the frequency of use of *Memory Language-Learning Strategies*. *Desire to Learn the Language* was the most important predictor (t = 4.81, p = .000, β = .37) of the frequency of use of *Affective Language-Learning Strategies*. *Motivational Intensity* (t =4.05, p = .000, β = .31) was the second most important predictor in explaining the frequency of use of *Social Language-Learning Strategies*. And the third and last predictor was college major IT (t = -2.87, p = .005, β = -.16), which displayed an inverse relationship with the frequency of use of social strategies among English-speaking college students learning a romance language. This inverse relationship indicated as the number of respondents who were IT majors increased the fewer use of *Social Language-Learning Strategies*.

The results of the regression analysis showed *Desire to Learn the Language, Motivational Intensity, and College major (IT)* were explanatory variables of the frequency of use of *Social Language-Learning Strategies* among English-speaking college students learning a romance language. The results of the regression analysis for RQ4 for *Social Language-Learning strategies* are summarized in Table 4-120.

Table 4-120

Summarized Regression Analysis of Explanatory Variables of Social Language-Learning Strategies (N=212)

Variable	***F***	***df***	***p***	***B***	***SE/ B***	**β**	***t***	***p***	R^2	**Adjusted R^2**
Model 1	107.26	1	.000						.338	.335
Model 2	64.34	2	.000						.381	.375
Model 3	47.13	3	.000						.405	.396
(Constant)				-.944	1.79					
Desire to Learn a Language				.468	.097	.37	4.81	.00		
Motivational Intensity				.494	.122	.31	4.05	.00		
College Major (IT)				-.4.12	1.43	-.16	-2.87	.01		

Research Hypotheses

Research Hypothesis 1: Explanatory Variables of Expected Course Grade

Demographic characteristics, language-learning experience, motivation, and frequency of use of language-learning strategies (memory, cognitive, compensation metacognitive, affective, and social strategies) are significant explanatory variables of the expected course grade of English-speaking college students learning a romance language.

Multiple regression analyses using the stepwise method was used to examine whether demographic characteristics, language-learning experiences, motivation, and frequency of use of language-learning strategies (*Memory, Cognitive, Compensation, Metacognitive, Affective*, and *Social Language-Learning Strategies*) were significant explanatory variables of the expected course grade of English speaking college students learning a romance language.

Dummy variables were first created for the categorical variables (gender and ethnicity). Subsequently, the stepwise method was conducted which consisted of SPSS entering predictors with the highest *t*- statistic into a model until none of the predictors *t*-statistic value was less that .05 (Field, 2005). The models consisted of predictors entered according to the highest significant statistic score. This process continued until none of the predictors were removed within the models (Field, 2005, p 226.) All five of the models produced were significant ($p < .05$). Model 5 was selected as the best explanatory model for predicting expected course grades of English-speaking college students studying a romance language.

Analysis of demographic characteristics, language-learning experience, motivation, and frequency of use of language learning strategies indicated that *Attitudes Toward Learning the Language, Years studying the language, Motivational Intensity and Affective Language-Learning Strategies were* significant predictors of expected course grade. The standardized beta coefficient (β) of the five predictors indicated their order of importance in explaining expected course grade. *Motivational Intensity* was the most important predictor ($t = 3.89$, $p = .000$, $\beta = .32$) of expected course grades. The amount of *years studying the language* ($t = 3.18$, $p = .002$, $\beta = .19$) was the second most important predictor of expected course grade. The third predictor of expected course grade was *Attitudes Toward Learning the Language* ($t = 2.32$, $p = .021$, $\beta = .19$). However, the following two predictors were significant of expected course grade, yet displaying an inverse relationship. The first inverse relationship was the respondents' *grade level.* As the grade level decreased ($t = -2.65$, $p = .009$, $\beta = -.17$) the reported expected course grades increased. The second inverse relationship that was an important predictor of expected course grade was *Affective Language-Learning Strategies* ($t = -2.47$, $p = .014$, $\beta = -.16$). The higher the expected course grades, the fewer *Affective Language-Learning Strategies* were reported used by respondents. Results of the regression analyses showed H1 was partially supported because *Attitudes Toward Learning the Language*, *years spent studying a language*, *Motivational Intensity*, *grade level*, and *Affective Language-Learning Strategies* were explanatory variables of expected course grades. The other variables were excluded from the regression model as explanatory variables. The results of the regression analysis for H1 are summarized in Table 4-121.

Table 4-121

Summarized Regression Analysis of Explanatory Variables of Expected Course Grade

Variable	*F*	*df*	*p*	*B*	*SE/ B*	β	*t*	*p*	R^2	Adjusted R^2
Model 1	45.72	1	.000						.185	.181
Model 2	28.44	2	.000						.221	.213
Model 3	22.71	3	.000						.254	.243
Model 4	19.03	4	.000						.277	.262
Model 5	16.84	5	.000						.298	.281
(Constant)				2.28	.166					
Attitudes toward learning the language				.009	.004	.19	2.32	.02		
Years study the				.048	.015	.19	3.18	.00		
Motivational Intensity				.059	.015	.32	3.89	.00		
Grade level				-.099	.037	-.166	-2.65	.01		
Affective Strategy				-.025	.010	-.159	-2.47	.01		

Hypothesis 2: Expected Course Grade and Language-Learning Strategies

Of the six language-learning strategies explanatory variables, the order of importance in predicting the expected course grade of English-speaking college students learning a romance language is as follows: metacognitive strategies> social strategies >cognitive strategies>memory strategies>affective memory> compensation.

The goal of this hypothesis was to test whether the hypothesized order of importance of the six language-learning strategies in predicting the expected course grade of English-speaking college students studying a romance language did in fact reflect the actual relative importance of each of the strategies in predicting expected course grade. It was determined that using hierarchical (forward) multiple regression would result in a model where only the significant predictors would be included. For that reason, the enter

method was used instead, with each strategy entered hierarchically into a separate block in the hypothesized order.

Using this method produced six models, with an additional strategy being added until all six were included in model 6. All of the models produced had significant *F* values, and the *t* statistic for both was significant for the constant. The R^2 was 13.1% for Model 1, and 20.6% for Model 6. The adjusted R^2 also gradually increased from Model 1 (13.1%) to Model 2 (13.6%). Model 6 was selected as the best explanatory model for predicting expected course grades according to the order of language learning strategy. The R^2 was 20.6% for Model 6 and the adjusted R^2 was 18.5%.

Analysis of individual language-learning strategies indicated two of the strategies (*Metacognitive and Affective*) were significant predictors of expected course grade. The remaining predictors (*Social, Cognitive, Memory and Compensation*) were not significant. The standardized beta coefficient (β) of the six language-learning strategies indicated their order of importance in explaining expected course grade. *Metacognitive Language-Learning Strategies* (t = 4.27, p = .000, β = *.45*) were the most important predictor in the model. *Affective Language-Learning Strategies* were the second most important predictor (t = -4.52, p = .000, β = -.34). This inverse relationship indicated the frequency of *Affective Language-Learning Strategies* use decreased, expected course grades increased. Results of the regression analyses showed H2 was partially supported because only metacognitive and affective strategies were explanatory variables of expected course grade, while *Social, Cognitive, Memory,* and *Compensation Language-Learning Strategies* were included in the model but were not significant. The results of the regression analysis for H2 are summarized in Table 4-122.

Table 4-122

Summarized Regression Analysis of the Classification of Language-Learning Strategies and Expected Course grade) (N=235)

Variable	*F*	*df*	*p*	*B*	*SE/ B*	β	*t*	*p*	R^2	Adjusted R^2
Model 1	36.29	1	.000						.135	.131
Model 2	18.28	2	.000						.136	.129
Model 3	12.14	3	.000						.136	.125
Model 4	9.12	4	.000						.137	.122
Model 5	11.81	5	.000						.205	.188
Model 6	9.85	6	.000						.206	.185
(Constant)				2.67	.206					
Metacognitive Strategies				0.04	0.01	.45	4.27	.00		
Affective Strategies				-0.05	0.01	-.34	-4.45	.00		
Social Strategies				0.01	0.01	.11	1.25	.21		
Cognitive Strategies				-0.00	0.01	-.03	-.287	.77		
Memory Strategies				0.01	0.01	.06	.769	.44		
Compensation Strategies				0.01	0.01	.03	.495	.62		

Research Hypothesis 3: Differences in the Frequency of Language-Learning Strategy Use According to Gender

Women will have significantly higher frequencies of use of language-learning strategies (total SILL score and each individual SILL strategy) than will men.

Seven independent samples *t*-tests were conducted to test whether female English-speaking college students learning a romance language had significantly higher frequencies of use of language-learning strategies (total *SILL* score and each individual strategy) than their male counterparts. H3 was supported for all strategy types except *Compensation* and *Affective Language-Learning Strategies*.

Total SILL Use

Female English-speaking college students learning a romance language had significantly higher total language-learning strategy scores (M= 147.73, SE = 3.94) than male English-speaking college students learning a romance language (M= 140.47, SE = 3.34, $t(233) = -2.74$, $p < .05$). Based on these results, H3 was supported for total *SILL* use. Results from the independent *t*-test comparing total *SILL* scores of males and females are displayed in Table 4-123.

Table 4-123

Comparison of Total Language-Learning Strategies According Gender

Group and Variable	N	Mean	Mean Difference	*t*-value	*p*-value
Total LLS					
Male	76	140.47	-10.80	-2.74	.01
Female	159	151.28			

Direct Language-Learning Strategy Use

Female English-speaking college students learning a romance language had significantly higher *Direct* (*Memory, Cognitive, and Compensation*) *Language-Learning Strategies* scores (M= 88.06, SE = 1.18) than their male counterparts (M= 81.47, SE = 1.90, $t(237) = -3.05$, $p < .05$). Based on these results, H3 was supported for *Direct Language-Learning Strategies* use. Results from the independent *t*-test comparing *Direct Language-Learning Strategies* scores of males and females are displayed in Table 4-124.

Table 4-124

Comparison of Direct Language-Learning Strategies According to Gender

Group and Variable	N	Mean	Mean Difference	*t*-value	*p*-value
Total Direct LLS					
Male	76	81.47	-6.58	-3.05	.00
Female	163	88.06			

Memory Language-Learning Strategy Use

According to the independent *t*-test conducted female English-speaking college students learning a romance language had significantly higher *Memory Language-Learning Strategies* scores (M= 26.96, SE = .44) than their male counterparts (M= 23.77, SE = .69, $t(243) = -3.95$, $p < .05$). Based on these results, H3 was supported for *Memory Language-Learning Strategies* use. The results from the independent *t*-test comparing *Memory Language-Learning Strategies* scores of males and females are displayed in Table 4-125.

Table 4-125

Comparison of Memory Language -Learning Strategies According to Gender

Group and Variable	N	Mean	Mean Difference	*t*-value	*p*-value
Total Memory LLS					
Male	79	23.77	-3.18	-3.95	.00
Female	166	26.96			

Cognitive Language-Learning Strategy Use

Female English-speaking college students learning a romance language had significantly higher *Cognitive Language-Learning Strategies* scores (M= 42.45, SE = .70) than did male students learning a romance language (M= 39.38, SE = 1.04, t (246) = -2.51, $p < .05$). Based on these results, H3 was supported for *Cognitive Language-Learning Strategies* use. The results from the independent *t*-test comparing *Cognitive Language-Learning Strategies* scores of males and females are displayed in Table 4-126.

Table 4-126

Comparison of Cognitive Language-Learning Strategies According to Gender

Group and Variable	N	Mean	Mean Difference	*t*-value	*p*-value
Total Cognitive LLS					
Male	79	39.38	-3.06	-2.51	.02
Female	169	42.58			

Compensation Language-Learning Strategy Use

Female English-speaking college students learning a romance language had higher *Compensation Language-Learning Strategies* scores (M= 18.41, SE = .30) than did their male counterpart (M= 17.94, SE = .48, $t(245)$ = -.863, $p > .05$), but the difference was not significant (p = .38). Based on these results, H3 was not supported for *Compensation Language-Learning Strategies* use. The results from the independent *t*-test comparing *Compensation Language-Learning Strategies* scores of males and females are displayed in Table 4-127.

Table 4-127

Comparison of Compensation Language-Learning Strategies According to Gender

Group and Variable	N	Mean	Mean Difference	*t*-value	*p*-value
Total Compensation LLS					
Male	78	17.94			
			-.47	-.86	.38
Female	169	18.41			

Indirect Language-Learning Strategy Use

Female students learning a romance language had significantly higher *Indirect (Metacognitive, Affective, and Social) Language-Learning Strategies* scores (M= 63.45, SE = 1.11) than their male counterparts (M= 58.93, SE = 1.59, $t(244)$ = -2.31, $p < .05$). Based on these results, H3 was supported for *Indirect Language-Learning Strategies* use.

The results from the independent *t*-test comparing *Indirect Language-Learning Strategies* scores of males and females are displayed in Table 4-128.

Table 4-128

Comparison of Indirect Language-Learning Strategies According to Gender

Group and Variable	N	Mean	Mean Difference	*t*-value	*p*-value
Total Indirect LLS					
Male	80	58.93	-4.52	-2.31	.02
Female	166	63.45			

Metacognitive Language -Learning Strategy Use

English-speaking college students learning a romance language, female had significantly higher *Metacognitive Language-Learning Strategies* scores (M= 28.57, SE = .57) than did their male counterpart (M= 26.55, SE = .82, $t(248) = -2.01$, $p = .05$). Based on these results, H3 was supported for *Metacognitive Language-Learning Strategies* use. The results from the independent *t*-test comparing *Metacognitive Language-Learning Strategies* scores of males and females are displayed in Table 4-129.

Table 4-129

Comparison of Metacognitive Language-Learning Strategies According to Gender

Group and Variable	N	Mean	Mean Difference	*t*-value	*p*-value
Total Metacognitive LLS					
Male	80	26.55	-2.02	-2.01	.05
Female	170	28.57			

Affective Language-Learning Strategy Use

Female English-speaking college students learning a romance language had slightly higher *Affective Language-Learning Strategies* scores (M= 14.90, SE = .32) than did their male counterparts (M= 14.41, SE = .42, $t(245) = -.91$, $p > .05$), but the difference was not significant (p = .36). Based on these results, H3 was not supported for *Affective Language-Learning Strategies* use. The results from the independent t-test comparing *Affective Language-Learning Strategies* scores of males and females are displayed in Table 4-130.

Table 4-130

Comparison of Affective Language-Learning Strategies According to Gender

Group and Variable	N	Mean	Mean Difference	t-value	p-value
Total Affective LLS					
Male	80	14.41	-.49	-.91	.36
Female	167	14.90			

Social Language-Learning Strategy Use

Female English-speaking college students learning a romance language had significantly higher *Social Language-Learning Strategies* scores (M= 20.24, SE = .40) than did their male counterparts (M= 17.96, SE = .60, $t(247) = -3.16$, $p < .05$). Based on these results, H3 was supported for *Social Language-Learning Strategies* use. Results

from the independent *t*-test *Social Language-Learning Strategies* scores of males and females are displayed in Table 4-131.

Table 4-131

Comparison of Social Language-Learning Strategies According to Gender

Group and Variable	N	Mean	Mean Difference	*t*-value	*p*-value
Total Social LLS					
Male	80	17.96	-2.27	-3.16	.00
Female	169	20.24			

Summary

This exploratory (comparative and explanatory (correlational) study using independent *t*-tests, ANOVA, simple and multiple regression examined the motivation and language learning strategy use of English-speaking college students learning a romance language. From a total accessible population of 256 English-speaking college students learning a romance language at George Mason University in Northern Virginia, a total of 255 participants (82 males and 171females) completed the surveys distributed in the participating classrooms producing a 99.6% response rate. The average age of respondents was 22 years old, and the majority of respondents were White (83.5%) and Non-Hispanic or Non-Latino (95.1%).

Before data analyses related to the exploration of the research questions and testing of the hypotheses were performed, the psychometric characteristics of each instrument were analyzed. The reliability of each instrument was estimated through the calculation of Cronbach's alpha, and exploratory factor analyses provided evidence of the

validity of each instrument. The *Motivation Scale* had calculated Cronbach's alphas of .94 (total sample), .94 (male respondents), and .93 (female respondents), indicating the scale had good reliability among the current sample (Field, 2005). All corrected-item totals were above .40 (Baillie, 1997), except for five items (4, 6, 7, 8 and 9) within the *Motivational Intensity* subscale. The exploratory factor analysis found three to four factors extracted, with items loading onto separate factors based on attitudes towards learning a language and intensity of motivation towards learning the target language. Factor loadings ranged from -.64 to .82 for the total sample.

The *SILL* scale had calculated Cronbach's alphas of .93 (total sample), .94 (male respondents), and .93 (female respondents), indicating the scale had good reliability among the current sample (Field, 2005). Most corrected-item totals were above .40 (Baillie, 1997), except for 14 items, which were about the methods students learn or handled learning new words and how they handled their emotions and feeling when learning the target language. Exploratory factor analysis found 13 factors extracted, with items loading onto separate factors based on methods English-speaking college students employed to learn the target language. Factor loadings ranged from -.31 to .85 (total sample).

The major purpose of this study was to examine relationships related to the demographic characteristics, language-learning experience, motivation, language-learning strategies, and expected course grade of English-speaking college students learning a romance language. There were four research questions and three hypotheses. The first research question was about the descriptive characteristics of the sample, and measures of central tendency were provided about the sample's demographic

characteristics, language-learning experience, motivation, language-learning strategies and expected course grade. The second research question looked at differences in expected course grade according to demographic characteristics, language-learning experience, motivation or language-learning strategies using *t*-tests and ANOVA with LSD and Scheffe. The third research question explored the difference in language-learning strategies according to demographic characteristics, language-learning experience or motivation using independent *t*-tests and ANOVA. The fourth research question explored the relationship between demographic characteristics, language-learning experience, motivation, and language-learning strategies using multiple regression with the stepwise method. To test hypothesis 2, the enter method was used, with each strategy entered hierarchically into a separate block in the hypothesized order, and in the order of importance in predicting the expected course grade of participants. Lastly, Independent *t* – test were used to test whether female English-speaking college students learning a romance language had significantly higher frequencies of use of language-learning strategies than their male counterparts.

In answering the research questions, findings indicated that there were some significant differences in motivation and language-learning strategies and expected course grade according to demographic characteristics, college major and college grade level. First, gender, age, college grade level, number or language spoken, and years studying a language all displayed a significant effect on expected course grade. Majority of the respondents were found to have spoken two or less languages (88.7%) and have four years or less (78%) of experience studying a romance language. These two variables had an effect on the expected course grade of English-speaking college students learning

a romance language, where results of LSD post hoc comparisons found those who reported speaking four or more languages reported the highest expected course grade than those who reported speaking less that four languages, in particularly 2.5 or less. The LSD post hoc comparisons also found respondents who reported having four years or more studying a language had reported significantly higher expected course grades than those who reported having less than four years studying a language. Second, of the nine independent *t*-tests and ANOVA analyzing the difference in language-learning strategies according to demographic characteristics, only gender (p = .01) exhibited a significant effect on the frequency of use of language-learning strategies. When the differences of language-learning strategies were analyzed by individual strategies, gender still displayed a significant effect on the frequency of use of language-learning strategies. ANOVAs were conducted to examine the difference of language-learning experiences and other categorical variables and very few were found to have an effect on the frequency of use of language-learning strategies. Multiple regressions and other regression analysis exhibited, almost each strategy, the sub-scale *Motivational Intensity* as the most important predictor and a significant explanatory variable of the frequency of use of language-learning strategies.

In testing H1, regarding demographic characteristics, language-learning experience, motivation and the frequency of use of language-learning strategies as explanatory variable of expected course grade; *Attitudes Toward Learning the Language*, *years spent studying a language*, *Motivational Intensity*, *grade level*, and *Affective Language-Learning Strategies* were found to be an explanatory variable of expected course grade among English-speaking colleges students learning a romance language.

This indicated H1 was partially supported. In testing H2, about the order of importance of the six language-learning strategies (*Metacognitive strategies> Social strategies >Cognitive strategies>Memory strategies>Affective strategies Memory strategies> Compensation strategies)* in predicting the expected course grade of respondents, results indicated that two of the language-learning strategies (*Metacognitive and Affective*) were significant predictors of expected course grade. Thus, H2 was partially supported because these two variables were explanatory variable of expected course grade; however, it did present itself in the predicted hypothesized order. In testing H3, seven independent *t* – test were conducted to test whether female English-speaking colleges students learning a romance language had significantly higher frequencies of use of language-learning strategies than their male counterparts. The analysis demonstrated that female respondents had significantly higher frequency of use of language-learning strategies, except for *Compensation* and *Affective Language-Learning Strategies.* Thus, the hypothesis was partially supported.

Chapter IV presented descriptive statistics of the sample, discussed the psychometric characteristics of the instrumentation used in the study, and reported the results of the examination of research questions and hypotheses testing. Additional analyses related to the research questions and hypotheses were also reported. Chapter V will present a discussion of the interpretations, limitations, practical implications, conclusions, and recommendations pertaining to this study, based on the literature and findings related to motivation, language-learning strategies, and expected course grade of English-speaking college students learning a romance language.

CHAPTER V

DISCUSSION

Chapter V presents a discussion of the results reported in Chapter IV about motivation, language learning strategies, and course performance among English-speaking college students learning a romance language. Results from the responses to the research questions and testing of the hypotheses are interpreted in light of the review of literature. Analyses related to the psychometric characteristics of the instruments used in this study are compared to studies reviewed related to the instrumentation. Study limitations, practical implications, conclusions, and recommendations for future study are also presented in this chapter.

Interpretations

Psychometric Findings Related to the Motivation Construct and Strategy Inventory for Language Learning (SILL)

Reliability of the Motivation Construct

Total construct. The 30-item ***Motivation*** construct is comprised of the following three subscales: 1) *Motivational Intensity*; 2) *Desire to Learn the Language*; and 3) *Attitudes Toward Learning the Language*. The Cronbach's alpha for total sample of English-speaking college students learning a romance language was .94, well above the .7 to .8 needed for a scale to demonstrate good reliability (Field, 2005). In terms of gender differences, the Cronbach's alpha was .93 for females, and .94 for males. This finding suggests that the *Motivation* construct, as a whole, was slightly more reliable for determining the motivation of male students learning a romance language than for their female counterparts.

Motivational Intensity. Among the total sample of English-speaking college students learning a Romance language, the Cronbach's alpha for *Motivational Intensity* was .65, which is lower than the .7 to .8, needed for a scale to demonstrate good reliability (Field, 2005). Upon discovering that item 9 contained incorrect response choices, the scale was reanalyzed omitting item 9. As a result, the Cronbach's alpha for *Motivational Intensity* increased to .72, which was within the .7 to .8 needed for a scale to demonstrate good reliability. These results showed the *Motivational Intensity* subscale was less reliable for the students in this study than it was for Canadian university students learning French (α =. 76) (Gardner et al., 1997).

Corrected item-total correlations should usually be greater than .30 (Garson, 2007). The *Motivational Intensity* sub-scale had three corrected item-total correlations below .30 (item 7, 9, and 10) and a total of seven corrected item-total correlations below .40, including item 2, 4, 6, and 8 (Baillie, 1997). When item 9 was removed and the *Motivation Intensity* items were re-correlated, the sub-scale had five corrected item-total correlations below .40, and one below .30. The results of the reliability analysis also suggested that item 7, which states "After I get my (Spanish, French, Italian) assignment back, I:" may not have been a good item for the study. The corrected item-total correlation for item 7 continuously fell below .30 when split and analyzed according to gender and languages. This suggests that the data producing sample size used in reliability and factor analysis was too small to be split and analyzed given the number of items in the scales (Mundfrom et al., 2005). Additionally, the participants in this study may not take the time to reflect upon assignments that have been returned by a professor or instructor. Lack of student reflection was found to be a "nuisance" in a study

conducted by Mills (2008), which required students to keep a reflective journal. The study found that students received their assignments but were reluctant to actively participate in the journaling process, and found this task to be busy work or just a waste of their time (Mills, 2008).

Desire to learn the language. For the total sample, the Cronbach's alpha for the *Desire to Learn the Language* sub-scale was .86, which is above the .7 to .8 needed for a scale to demonstrate good reliability (Field, 2005). This result suggests the sub-scale was more reliable for the present sample than for a sample of Canadian university students learning French (α =. 78). Corrected item-total correlations should usually be greater than .30 (Garson, 2007). The *Desire to Learn the Language* sub-scale had one corrected item-total correlation below .40 (Baillie, 1997). This is consistent with a study conducted by Gardner et al. (1997) where the sub-scale was also found to have good reliability.

Attitudes towards learning the language. The Cronbach's alpha for the total sample of the *Attitudes Toward Learning the Language* sub-scale was .95, representing a very good estimate of reliability. Corrected item-total correlations should usually be greater than .30 (Garson, 2007). The *Attitudes Toward Learning the Language* sub-scale had no corrected item-total correlations below .40 (Baillie, 1997). The Cronbach's alpha for this study was higher than that of a study of English-speaking Canadian university students learning French (α =. 86) by Gardner et al. (1997). Gardner et al. conducted a study of 82 female and 20 male university students enrolled in introductory French, and this study analyzed 167 female and 80 male English-speaking college students learning a romance language. One difference between the two groups may be that students in this study were studying their language of choice, while it was not

specified if the students studying French were given a choice, since Canada does have a French speaking region and sometimes the language is required (Gardner et. al, 1997). Student *Attitudes Towards Learning the Language* in this study may have been more sincere due to the context of the study and the simplicity of the data collection, while students in Gardner's study were paid and took the entire *Attitude Motivation Test Battery* (AMTB) in one sitting (Gardner & Tremblay, 1995; Gardner et. al, 1997).

Validity of the Motivation Construct

One of the purposes of this study was to test the multidimensionality of the *Motivation* construct with the current sample. Results indicated partial support for the three-factor structure of the *Motivation* construct. For the total sample, all the original items (items 21 to 30) for the *Attitudes Toward Learning the Language* scale loaded together onto factor one, named *"Feeling and Attitude Towards the Language"* by researcher, along with two other items, items 2 and 15. It is possible items 2 "If (Spanish, French, Italian) were not taught in school, I would:" and 15 "If it were up to me whether or not to take (Spanish, French, Italian), I would:" loaded onto this factor because they characterize self-energized actions that would lean toward their attitudes toward the language rather than just the desire or intensity of the students' intrinsic motivation. Four of the *Desire to Learn the Language* items (14, 17, 18, and 20) loaded onto Factor two, *Initiatives Taken to Learn the Language* along with items 9 and 10 from *Motivational Intensity*. Factor two pertained to the desires and self-motivated activities initiated by the learner to *acquire* the target language. Four items from the *Motivational Intensity* scale (1, 3, 4, and 5) loaded onto factor three, named *Intrinsic-Motivating Actions Towards Learning the Language*. These items all pertained to different

motivating tactics the language-learner used to acquire, understand, and study the target language. Factor four was named *Opportunity Taken to Learn the Language* and included four items (8, 11, 12, and 19), which pertained to desires and self-motivating actions taken to learn and practice the target language. The fifth factor named *Initiatives Taken to Excel in the Target Language* (items 6 and 7) pertained to the application of skills and the initiation of extra activities by the student toward learning the target language.

Reliability of the Strategy Inventory for Language Learning

Total SILL. The *SILL* has been described as a multidimensional instrument with good estimates of reliability for both the original containing 121 items (α =.96), and the current 50-item version 7.0 used in this study (α =.86) (Khalil, 2005; Oxford & Nyikos, 1989). For this study, the Cronbach's alpha for the total sample of English-speaking college students learning a romance language was .93, which was higher than the .86 reported by Khalil (2005) from a study of Palestinian students learning English as a second language, but lower than .96 reported by Oxford and Nyikos (1989) using Midwestern university students. In this study, the Cronbach's alpha for male students was .94, and .93 for female students, indicating the *SILL* was slightly more reliable for measuring the language-learning strategies of males than for their female counterparts. For the total *SILL,* 14 of the 50 corrected item-total correlations were below .40, and of the 14, nine were below .30 (Garson, 2007). This indicates that several of the items in the *SILL* did not correlate well with each other.

The *Strategy Inventory for Language Learning (SILL)* contains six sub-scales organized into *Direct* and *Indirect Language-Learning Strategies* (Oxford, 1990; Shmais,

2003). For the total sample in this study, the Cronbach's alphas for the three sub-scales classified as *Direct Language-Learning Strategies* were *Memory* (α =. 73), *Cognitive* (α =. 83), and *Compensation* (α =. 63) *Strategies*, while the Cronbach's alphas for the *Indirect Language-Learning Strategies* were *Metacognitive* (α =. 89), *Affective* (α =. 58), and *Social* (α =. 80) *Strategies*.

Memory language-learning strategies. Although four of the nine corrected-item total correlations were below .40, the Cronbach's alpha score for *Memory Language-Learning Strategies* was .73, representing a good estimate of reliability. Item number six "I use flashcards to remember new (Spanish, French, Italian) words" if deleted would increase the alpha from .734 to .748. This could possibly be due to the new technological methods used by language-learners to learn a language, which may diminish the use of paper or "flash card" methods.

Cognitive language-learning strategies. The Cronbach's alpha for the total *Cognitive Language-Learning Strategies* was .83, with only two of the fourteen corrected-item total correlations below .40. *Cognitive Language-Learning Strategies* had the highest Cronbach's alpha of the direct learning strategies. This finding is consistent with other research, where *Cognitive Language-Learning Strategies* were usually seen as the most effective toward language-learning achievement for some researchers (Chamot & O'Malley, 1990; Oxford, 1990).

Compensation language-learning strategies. The Cronbach's alpha for the *Compensation Language-Learning Strategies* subscale was .63. Four of the six corrected-item total correlations were below .40, but none would cause the Cronbach's alpha to increase if deleted. This scale had the lowest Cronbach's alpha of the *Direct*

Language-Learning Strategies. One possible explanation might be students' lack of familiarity with the foreign language may hinder the student ability to create new words or use other words to compensate for the lack of knowledge or proficiency in the target language.

Metacognitive language-learning strategies. The calculated Cronbach's alpha total for the *Metacognitive Language-Learning Strategies* subscale was .89, indicating it had good reliability (Field, 2005). There were no items with corrected-item total correlations below .40, and no items would cause the alpha to increase if they were to be deleted. This scale had the highest Cronbach's alpha of all the strategy types. This strategy pertains a lot to the effort a student applies towards organizing, planning and assessing the language in which they are learning (Oxford, 1990). A possible explanation to a high Cronbach's alpha score might be that the questions measured students' motivation towards the target language and their attempt to use the language, outside of the classroom setting.

Affective language-learning strategies. The calculated Cronbach's alpha total for the *Affective Language-Learning Strategies* subscale was .58. A Cronbach's alpha of .7 to .8 indicates a scale has "good" reliability (Field, 2005). The Cronbach's alpha indicates this subscale has poor reliability. Although five of the six corrected-item total correlations were below .40, none of the items would cause the alpha to increase if they were deleted. This scale had the lowest Cronbach's alpha of all the strategy types. It is possible that there is a problem with the entire affective subscale rather than its individual items. The measurement of students *Affective Language-Learning Strategies* is a factor

that needs to be further studied with emphasis on attitudes, anxiety and other emotional sociopsychological variables (Khalil, 2005; Green & Oxford, 1995).

Social language-learning strategies. The calculated Cronbach's alpha total for the *Social Language-Learning Strategies* subscale was .80. None of the six corrected-item total correlations was below .40. These results suggest that the subscale had good estimates of reliability. This could possibly be due to the feasibility of the questions asked in this section, which have to do with the student attempts to practice the language with native speakers, or if the student ask questions in the target language and whether the students practice with other known native speaker of the target language.

Validity of the SILL

The number of factors actually extracted was determined by the number of items with eigenvalues greater than 1. Factor loadings less than .3 were suppressed to make interpretation easier. For the total sample, the number of eigenvalues indicated 13 factors, explaining 64.6% of the total variance, while the scree plot indicated five to six factors. The scree plot was consistent with Oxford (1990). However, the number of eigenvalues over one was consistent with other research where there was a lack of evidence for the six-factor *SILL* (El Dib, 2004; Woodrow, 2005). Both studies found eight, rather than six, factors. In a study of 750 students in Kuwait, factor analysis resulted in eight, rather than the nine that had been previously reported in a previous study by El Dib (El Dib, 2004). The identified factors explained 42.10% of the variability among the 50 items, version 7.0 SILL (El-Dib, 2004). Findings from the factor analysis were consistent with previous findings in other studies investigating

strategies in foreign language context (China, Japan, and combined United States and the hybrid contexts Puerto Rico) (El-Dib, 2004; Oxford, 1995).

Research Questions

Research Question 1: Demographic Characteristics, Language Learning Experiences, Motivation, Language Learning Strategies Used, and Expected Course Grade of English Speaking College Students Who are Second Language Learners

Research Question 1 explored the sociodemographic characteristics, language-learning experiences, motivation, language-learning strategy use, and expected course grade among English-speaking college students learning a Romance language using frequency distributions, measures of central tendency, and variability. The following provides the interpretations related to the findings reported in Chapter IV.

Demographic characteristics. According to the number of valid responses, the data-producing sample of 255 English-speaking college students learning a romance language consisted of more females (67.7%) than males (32.3%). Respondents in the study were from George Mason, a state university in Northern Virginia. The average age for the total sample was 21.84 years old consistent with the average age of students at the university (21 full-time, 23 part-time) (GMU, 2008). This suggests the average age in years seems to be comparable to other studies conducted at colleges and universities (Onwuegbuzie et al., 1990; Oxford & Nyikos, 1989)

The grade level of English-speaking college students learning a romance language was rather evenly distributed among freshmen (17.8%), sophomores (25.7%), juniors (33.2%), and seniors (23.3%). In this study, more than half of the sample reported majors in the humanities, social science, education, and human development areas (79.2%). The

majority of respondents were White (83.5%), and non-Hispanic or non-Latino (95.1%), which closely represents the racial and ethnic make-up of students at George Mason University (GMU, 2008).

Language-learning experience. Language-learning experience was measured by students' responses to three questions: 1) their primary language; 2) the number of years spent studying a language; and 3) the number of languages spoken by the student. Of the 256 responses, the majority of students (94.6%) selected English as their primary language, and was thus included in the analyses related to this study. The majority of students (60.5%) reported speaking only one language. The number of years spent studying a language was categorized into the following five groups: 1) 0 to 1 year; 2) 1.5 to 2.5 years; 3) 3 to 4 years; 4) 4.5 to 5.5 years; and 5) 6 years and over. Most respondents (27.9%) fell into the 0 to 1 year category. However, respondents reported studying a language an average of 2.75 years. This suggests that the majority of English-speaking college students spent less than three years studying a language, thus supporting the literature regarding the lack of contact hours and years needed by language learners to achieve level two or three proficiency in a target language (Omaggio-Hadley, 2001; Brecht & Rivers, 2000; GAO, 2002, 2006; Malone, Rifkin, Christian, & Johnson, 2003).

Motivation. Motivation was measured using the *Motivation* construct from Gardner's *Attitude/Motivation Test Battery* (*AMTB*) (1985). The *Motivation* construct is comprised of three subscales: *Motivational Intensity, Desire to Learn the Language, and Attitudes Toward Learning the Language*. The average *Motivation* scores for English-speaking college students learning a romance language was 99.21 (SD = 19.40), out of a possible 127 points. The mean score may have been affected by an error in the response

choices for item 9, part of the *Motivational Intensity* subscale. Females had higher motivation scores (M = 102.21, SD = 17.87) than their male counterparts (M = 93.18, SD = 21.14).

Among the total sample, the average *Motivational Intensity* score was 22.65 (SD= 3.31). The *Motivation Intensity* scores of female respondents (M = 23.14, SD =3.25) were slightly higher than that of male respondents (M = 21.65 SD= 3.24). This seems to be consistent with other studies where women tend to exhibit higher *Motivational Intensity* than their male counterparts when it comes to learning the target language and strategy usage (Oxford & Nyikos, 1989; Gardner & Tremblay, 1994). The average *Desire to Learn the Language* score (M = 22.52, SD = 4.30) of English-speaking college students learning a romance language reflected a strong desire to learn the target language. The *Desire to Learn the Language* scores of male respondents were slightly lower than (M = 21.05, SD = 4.35) that of female respondents (M = 23.22, SD = 4.10). Based on a highest possible score of 70 the *Attitudes Toward Learning the Language* scores of respondents (M = 54.65, SD = 13.56) reflected a good feeling towards learning the target language. The average scores (M = 51.19, SD = 14.60) of male respondents were slightly lower than female participants (M = 56.37, SD = 12.75). This indicates that female English-speaking college students learning a romance language had a more positive attitude toward learning the language.

Strategy inventory for language learning (SILL). Language-learning strategies were measured using the *SILL* scale developed by Oxford (1990). The *SILL* scale is comprised of six subscales organized as either direct strategies (*Memory, Cognitive, Compensation),* or indirect strategies (*Metacognitive, Social, and Affective).* Total

possible *SILL* scale scores range from 50 to 250. The average *SILL* score for English-speaking college students learning a romance language in this study was 147.73 (*SD* = 28.60). The average total *SILL* item mean for this study was 2.95. Individual strategy scale item means for this study ranged from 2.45 for *Affective* to 3.25 for *Social Language-Learning Strategies* use. In comparison, Khalil (2005) found scale item means ranged from 2.95 for memory to 3.55 for Metacognitive. This indicates students in this study had lower frequencies of strategy use compared to the Palestinian university students used in the Khalil study.

The average *Direct Language-Learning Strategies* use for the total sample (*M* = 85.97, *SD* = 15.81) was higher than the average use of *Indirect Language-Learning Strategies* (*M* = 61.92, *SD* = 14.45). This study revealed that English-speaking college students learning a romance language used more *Direct Language-Learning Strategies* than *Indirect Language-Learning Strategies*. Although other studies had different samples, this research is consistent with other studies in terms of *Direct* and *Indirect* language-learning strategies (Oxford & Green, 1995; Oxford & Nyikos, 1989; Oxford 1990). This study was consistent with other studies that stated good language learners use many strategies, and the scores in the study show a variety of strategies used among English-speaking college students learning a romance language (Oxford & Nyikos, 1989; Oxford, 1990).

Memory Language-Learning Strategies use imagery and help students store and retrieve new information (Oxford, 1990; Shmais, 2003). *Memory Language-Learning Strategies* are comprised of nine items with possible scores ranging from 9 to 45. The average *Memory Language-Learning Strategies* score among the 246 respondents (*M*

=25.92, *SD* = 6.07) indicated that students did not use *Memory Language-Learning Strategies* as frequently as they did other *Direct Language-Learning Strategies*. On average, female respondents (*M* = 26.96, *SD* = 5.76) used *Memory Language-Learning Strategies* slightly more frequently than did their male counterparts (*M* = 23.77, *SD* = 6.18), which is in contrast to a study that showed male favoring *Memory Language-Learning Strategies* more than female (Khalil, 2005).

Cognitive Language-Learning Strategies are strategies that enable learners to understand and produce new language by many different means (Oxford, 1990; Chamot & O'Malley, 1990). *Cognitive Language-Learning Strategies* are comprised of 14 items, with possible scores ranging from 14 to 70. Among the 249 participants, scores (*M* = 41.47, *SD* = 9.23) indicated that the students had somewhat good use of *Cognitive Language-Learning Strategies*. On average females used slightly more of this strategy (*M* = 42.45, *SD* = 9.11) than did male respondents (*M* = 39.38, *SD* = 9.25), which is consistent with a study that presented females using more *Cognitive-Compensatory* strategies, a factor which combines aspects of both *Cognitive* and *Compensation Language-Learning Strategies*, than their male counterparts (El-Dib, 2004).

Compensation Language-Learning Strategies are strategies that allow learners to use the language despite often-large gaps in knowledge (Oxford, 1990; Shmais, 2003). There are six items within *Compensation Language-Learning Strategies,* with a possible score of 6 to 30. Of the 248 respondents, the average score (*M* = 18.28, *SD* = 4.05) indicated that respondents did not have a high frequency of use of this strategy. However, females had a slightly higher average score (*M* = 18.41, *SD* = 3.95) than males (*M* =17.94, *SD* = 4.27) indicating females used more *Compensation Language-Learning*

Strategies than did males. This is consistent with a study conducted by El-Dib (2004) depicting females (*M=3.56*) using more cognitive-compensatory strategies than the males (*M = 3.41)*. This is consistent with research indicating females have a higher frequency of language-learning strategy use than do males (Oxford & Green, 1995; Oxford & Nyikos, 1989; Oxford, 1994).

Metacognitive Language-Learning Strategies s are strategies that allow learners to control their own cognition–that is, to coordinate the learning process by using functions such as centering, arranging, planning, and evaluating (Oxford, 1990; Chamot & O'Malley, 1990; Wenden 1999; Shmais, 2003). *Metacognitive Language-Learning Strategies* contain 9 items, with possible scores ranging from 9 to 45. Among the 251 English-speaking college students learning a romance language, the average score (*M* = 27.90, *SD* = 7.44) indicated a frequent use of *Metacognitive Language-Learning Strategies*. Again, the average scores of females (*M* = 28.57, *SD* = 7.44) were slightly higher than the average scores of males (*M* = 26.55, *SD* = 7.32). This is also consistent with research stating that females use more strategies than males (Green &Oxford, 1995; Oxford & Nyikos, 1989; Oxford, 1994). Female respondents (*M* =3.55) in other studies specifically use more *Metacognitive Language-Learning Strategies* than the male respondents (*M* = 3.30) (El Dib, 2004; Khalil, 2005).

Affective Language-Learning Strategies are strategies that help to regulate emotions, motivations, and attitudes within the second language learner (Oxford, 1990). *Affective Language-Learning Strategies* contain 6 items, with possible scores ranging from 6 to 30. Among the 248 participants the average *Affective Language-Learning Strategies* score (*M* = 14.73, *SD* = 3.98) indicated that this strategy was not as highly

used as the other language-learning strategies. The average scores of female respondents (M = 14.90, SD = 4.08) were slightly higher than the average scores of male respondents (M = 14.41, SD = 3.75), which indicated women used more *Affective Language-Learning Strategies* than men, which is consistent with another study which depicted women (M= 2.95) using *Affective Language-Learning Strategies* slightly more than men (M= 2.86) (Khalil, 2005).

Social Language-Learning Strategies are strategies that help students learn through interaction with others (Oxford, 1990). This strategy contains six items, and has a possible score of 6 to 30. The average *Social Language-Learning Strategies* score for the 250 participants (M = 19.50, SD = 5.38) indicated that respondents frequently used this strategy. Again, female respondents' average score (M = 20.24, SD = 5.25) was higher than the males' average *Social Language-Learning Strategies* score (M =17.96, SD = 5.39), indicating that female used more *Social Language-Learning Strategies* than their male counterparts. This is consistent with studies that have showed women (M= 3.33) using more of this type of strategy than their male (M = 3.20) counterpart (Khalil, 2005)

Expected course grade. Expected course grade was measured using an 11-point grading scale in which the respondents selected their expected grade. The average expected course grade of the total sample (M = 3.37, SD = *.60*) was between a B+ and an A-, indicating students had higher than average expected course grades. Overall, female respondents reported slightly higher expected course grades (3.43 or between a B+ and A-) in comparison to their male counterparts (3.25 or between a B and B+), which is consistent with other literature (Onwuegbuzie et al., 2000; Oxford, 1990; Oxford &

Green, 1995). Unlike other studies that were able to obtain grade point averages to measure language-learning achievement, this study reported the expected self-reported grades of language learners (Onwuegbuzie et. al, 2000).

Research Question 2: Differences in Expected Course Grade According to Demographic Characteristics and Language-Learning Experience

Research Question 2 explored differences in expected course grade among English-speaking college students learning a Romance language according to demographic characteristics and language-learning experience using independent *t*-tests, and ANOVA with LSD and Scheffe post hoc comparisons. The following provides the interpretations related to the findings reported in Chapter IV.

Demographics. This study found that expected course grade differed significantly (p = .03) according to gender, where the average expected course grade for females (M= 3.43, SD = 0.56) was significantly greater than that of male respondents (M = 3.25, SD = 0.67). This may have been because females tend to use more strategies (Oxford, 1990; Green & Oxford, 1995), and greater strategy use is associated with higher academic achievement (Onwuegbuzie et al., 2000). Expected course grades also differed significantly according to age category (p = .01). The highest course grade was reported by those respondents who were 18 years old (M = 3.65, SD = .36), while the lowest expected course grades were reported by those respondents who were 22 years old (M = 3.10, SD = .71). This means that while 18 year olds had expected course grades of almost an A-, the 22 year olds had expected course grades of about a B. College grade level also had a significant effect on expected course grade (p = .01). The freshmen had slightly higher average expected course grades (M = 3.54, SD = .42) in comparison to

seniors (M = 3.14, SD = .79), who reported the lowest average expected course grade. Again the freshmen had expected course grades between a B+ and an A-, while the seniors had expected course grades closer to a B. These results suggest 18 year old freshmen may have inflated their expected course grades due to unrealistic expectations, while the older seniors probably had more realistic grade expectations. Many of the studies reviewed did not specify whether or not there was a significant difference in expected course grade according to certain demographic characteristics such as grade level. In certain studies, foreign language academic achievement or language-learning achievement was measured by grade point average and whether or not they differed according to language-learning strategies used (Brecht & Rivers, 2000; Brenner, 1999; Chamot & O'Malley, 1990; Onwuegbuzie et al., 2000; Oxford & Green, 1995; Oxford & Nyikos, 1989). There were no significant differences in expected course grade according to college major, race, or ethnicity. This may suggest that variables such as cultural background, or other factors not examined in this study may influence expected course grade (Onwuegbuzie et al., 2000; Oxford & Nyikos, 1989; Tercanlioglu, 2004).

Language-learning experience. Language-learning experience was made up of two questions pertaining to the amount of languages an individual spoke and the years spent learning the target language. This study discovered a significant difference in expected course grade according to language-learning experience. Results of ANOVA found significant differences based on the number of languages spoken (F = 5.43, p = .00). Results of ANOVA LSD post hoc comparisons found a significant difference between English-speaking college students who spoke more than four languages (M = 4.0, SD = .00) and those that spoke one language (M = 3.26, SD = .62, p = .03). This

indicated that students who spoke several languages expected to get an A in the course, while those who spoke only one language (English) expected to get between a B and a B+. LSD (p = .00) and Scheffe (p = .01) post hoc comparisons both found significant differences of almost half a letter grade between respondents who spoke one language and those who spoke two languages. Similarly, LSD post hoc comparisons found almost a half letter grade difference between respondents who spoke one language and respondents who spoke three languages (p = .04). Results suggested the more languages students spoke, the higher their expected course grade.

This study also revealed a significant difference in expected course grade according to years spent studying a language. English-speaking college students who spent 6 to 20 years studying a language reported a higher expected course grade (M = 3.60, SD = .47) in comparison to those spent 1.5 to 2.5 years studying a language (M = 3.18, SD = .68). In terms of a letter grade, those with fewer years spent studying a language expected to get about a B, while those who had studied a language for several years expected to get almost an A-. This showed the longer you studied a language the higher your expected course grade. This is somewhat consistent with studies that have emphasized the increase in foreign-language achievement, (where grade point average was used to measure achievement) was significantly affected by the amount of years a person spent studying a language (Brecht, Davidson, & Ginsberg, 1993; Carol, 2003; Gardner, et al., 1997; Krashen, 1985; Onwuegbuzie et al., 2000).

Research Question 3: Differences in the Frequency of Language-Learning Strategy Use Among English-Speaking College Students Learning a Romance Language According to Demographic Characteristics and Language-Learning Experience

Research Question 3 explored differences in the frequency of language-learning strategy use among English-speaking college students learning a romance language according to demographic characteristics, language-learning experience, motivation, or language-learning strategies using independent *t*-tests and ANOVA with LSD and Scheffe post hoc comparisons. The following provides the interpretations related to the findings reported in Chapter IV.

Demographic characteristics. In many studies gender was found to have had an effect on the frequency of use of language-learning strategies (El-Dib, 2005; Khalil, 2005; Oxford & Nyikos, 1989; Oxford, 1990). Women were found to use more strategies than men (Khalil, 2005; Oxford & Nyikos, 1989). The female respondents in this study had significantly higher total language-learning strategy *(SILL)* scores (M= 151.42, SE =2.21) than the male respondents (M= 140.47, SE= 3.34, p = .01), indicating that women use more language-learning strategies than men. This gender difference was consistent with research that found significant differences in overall strategy use between genders (El-Dib, 2004; Khalil, 2005; Oxford & Nyikos, 1989; Oxford, 1990; Oxford & Erhman, 1995; Oxford & Green, 1995; Shmais, 2003). *Memory Language-Learning Strategies* were used significantly more frequently by females (M= 26.96, SE = *.44*) than males (M= 23.77, SE = *.69*) (t = -3.95, p = .00). The frequency of use of *Cognitive Language-Learning Strategies* was higher among female respondents (M= 42.58, SE = *.72*) than

male respondents (*M*= 39.38, *SE = 1.04, p* = .01). The finding from this study supported a study conducted on Kuwaiti second language learners where females were found to use cognitive-compensatory and repetition-revision strategies significantly more than males (El-Dib, 2004). Although it has been suggested that women use more *Cognitive-Compensatory* strategies than men, this study did not find a significant effect on the frequency of use of *Compensation Language-Learning Strategies* according to gender (El-Dib, 2004). Concurrently, in this particular research there was a significant effect on the total frequency use of *Direct Language-Learning Strategies* (*Memory, Cognitive*, and *Compensation*) by gender, whereby female respondents (*M* = 88.20, *SE = 1.19*) had a significantly higher total *Direct Language-Learning Strategies* score than male respondents (*M* = 81.47, *SE = 1.90, p* = .00). This finding was consistent with previous studies where women have been found to have a higher frequency of language-learning strategy use than men ((El-Dib, 2004; Khalil, 2005; Oxford & Nyikos, 1989; Oxford, 1990; Oxford & Erhman, 1995; Oxford & Green, 1995; Shmais, 2003).

Female respondents had significantly higher *Metacognitive Language-Learning Strategies* scores (*M*= 28.57, *SE = .57*) than their male counterparts (*M*= 26.55, *SE = .82, p* =.05), which is consistent with earlier studies (El-Dib, 2004; Oxford & Green, 1995). Gender did not have a significant effect on *Affective Language-Learning Strategies*, possibly due to the phrasing of the questions. Females did have higher *Social Language-Learning Strategies* scores (*M* = 20.24, *SE* = .40) than males (*M* = 17.96, *SE = .60, p = .00).* Although this was consistent with research showing women having higher frequency of language-learning strategy use than men, most research did not specify which language-learning strategy, and, when identified, the strategies were from

emerging factors (El-Dib, 2004; Khalil, 2005; Oxford & Nyikos, 1989; Oxford & Erhman, 1995; Oxford & Green, 1995; Shmais, 2003).

Besides gender, age was also shown to have a significant effect on frequency of language learning strategy use. Age produced a strong trend effect on *Memory Language-Learning Strategies* ($F = 2.16$, $p = .06$). There was a significant effect of age on the total *Compensation Language-Learning Strategies* ($F = 2.51$, $p = .03$) where by LSD post hoc comparisons showed respondents who were 23 years or older had significantly lower compensation strategy scores than those who were 19, 20, or 21 years old. There was no significant difference between those respondents who were 23 years old or older and those who were 22 or 18 years old. These differences suggest younger respondents used different techniques to compensate for words they did not know in the target language. The lack of significant differences between some of the groups may have been due to the smaller number of cases in those age groups.

College grade level was another demographic characteristic that had a significant effect on the use of a specific language-learning strategy ($F = 2.66$, $p = .049$). Freshmen English-speaking college students reported the highest use of *Metacognitive Language-Learning Strategies* ($M = 30.38$) and seniors reported the lowest frequency of use of *Metacognitive Language-Learning Strategies* ($M = 26.28$). The only significant difference revealed by the Post-Hoc comparison was that between seniors and freshmen respondents (p LSD = .01, p Scheffe = .05). The effect of grade level on strategy use was partially consistent with a study conducted by Shmais (2003); however, his study displayed sophomores and juniors having a higher frequency of use of *Social Language-Learning Strategies.*

Language -learning experience was seen as having an effect on the frequency of use of language-learning strategies. There was a significant difference in the frequency of use of *Cognitive Language-Learning Strategies* according to the number of languages spoken by a respondent. For the total sample, English-speaking college students who spoke four or more languages reported the highest total *Cognitive Language-Learning Strategies* score (M = 53.33) than students who spoke one language (M = 40.47) (p = .02). However, other studies did not really examine the differences in the frequency of language-learning strategy use according to the number of languages spoken by a student. The number of languages spoken has been found to have a strong correlation with foreign language academic achievement however; the frequency of use of *Cognitive Language-Learning Strategies* has not been thoroughly examined with such variables (Onwuegbuzie, Bailey, & Dailey, 2000).

Respondents who spoke four or more languages had significantly higher frequency of use of *Metacognitive Language-Learning Strategies* use (M = 36.33) than respondents who spoke one language (M = 26.96) (p =. 03). This is consistent with other research reviewed in this study that depicted the more languages spoken the higher the frequency of language-learning strategy use, in particularly metacognitive strategies (Wenden, 1999).

There was no significant effect of demographic characteristics, and language-learning experience on the frequency of use of *Affective Language-Learning Strategies.* A trend relationship was displayed between *Affective Language-Learning Strategies* and the number of languages spoken (p = .09). *Affective Language-Learning Strategies* had been one of the least examined language-learning strategies and warrants further

assessments (El-Dib, 2004; Khalil, 2005; Oxford & Nyikos, 1989; Oxford & Erhman, 1995; Oxford & Green, 1995; Shmais, 2003).

There was also not an effect on *Social Language-Learning Strategies* according to demographic characteristics or language-learning experience. Although in a study conducted by Oxford & Nyikos (1989) women were found to use more *Social Language-Learning Strategies* than did men, this study did not show a difference or an effect on the frequency of use according to gender.

There was a significant effect on the frequency of use of *Indirect Language-Learning Strategies* according to gender (p = .02). Female respondents had a higher frequency of use of *Indirect Language-Learning Strategies* (M = 63.45) than did their male counterpart (M = 58.93). Again, this is concurrent with the proposition that women use more language-learning strategies and most frequently than men (El-Dib, 2004; Khalil, 2005; Oxford & Nyikos, 1989; Oxford & Erhman, 1995; Oxford & Green, 1995; Shmais, 2003).

In this study college grade level also displayed a significant effect on the difference of frequency of *Indirect Language-Learning Strategies* use (p = .05). Freshmen were reported having the highest frequency of use of *Indirect Language-Learning Strategies* (M = 65.44) than seniors who had the lowest frequency of use (M = 57.67). Although *Direct* (*Memory, Cognitive* and *Social*) *Language-Learning Strategies* have shown differences according to college grade level, yet none of the studies exhibited college grade level as having a significant effect on the frequency of use of *Indirect Language-Learning Strategies* (Shmais, 2003).

The difference in the frequency of language-learning strategies according to the number of languages spoken was not examined in previous studies. For this study the number of languages spoken proposed to have a significant effect on the frequency of use of *Indirect Language-Learning Strategies* (p= 05). Respondents who speak four or more languages reported the highest frequency of use of *Indirect Language-Learning Strategies* (M = 80.33) and students who speak one language reported using the least *Indirect Language-Learning Strategies* score (M = 60.48).

Research Question 4: Demographic Characteristics, Language-Learning Experience, Motivation, and Frequency of Use of Language-Learning Strategies Among English-Speaking College Students Learning a Romance Language

Research Question 4 examined whether demographic characteristics, language-learning experience, and motivation were explanatory variables of the frequency of use of language-learning strategies of English-speaking college students learning a romance language using stepwise regression analyses. The following provides the interpretations related to the findings reported in Chapter IV.

Result of the regression analysis produced significant models for the total *SILL, Direct* and *Indirect Language-learning Strategies,* and *Memory*, *Cognitive*, *Compensation*, *Metacognitive*, *Affective*, and *Social Language-Learning Strategies. Motivational Intensity* was a positive explanatory variable for the frequency of use of the total *SILL* and all of the language-learning strategy subscales, followed by *Desire to Learn a Language* and *College* major. This is consistent with past studies that motivated learners use more strategies (Chamot & O'Malley, 1990; Khalil, 2005; Oxford, 1990; Oxford & Green 1995).

Total SILL. For the total sample, the significant model (F = 77.25, p = .000) chosen for predicting the frequency of use of language-learning strategies following stepwise regression analysis had three significant individual predictors explaining 53.7% of the total variance. The standardized beta indicated *Motivational Intensity* (t = 6.45, p = .000, β = *.44*) was the most important predictor, followed by *Desire to Learn the Language* was the second most important predictor (t = 5.17, p = .000, β = .35), and *College majors, IT* (t = -2.37, p = .002, β = *-.12*). The inverse relationship for *college majors, IT* indicated the greater the frequency of respondents who were IT majors, the lower the *frequency of total language-learning strategy use.* This is a possible result of the nature of this particular major, which does not require a great deal of language communication. In this study, as in other prior research, *Motivational Intensity* appeared in every model as a significant explanatory variable, indicating that highly motivated language-learners use more language-learning strategies (Chamot & O'Malley, 1990; Khalil, 2005; Oxford, 1990; Oxford & Green 1995). Although past research looked at the frequent use of language-learning strategy and proficiency, motivation was seen as a key component to the frequency and type of strategies language learners used (Chamot & O'Malley, 1990; Oxford & Green 1995; Wenden, 1999).

Direct strategies. The stepwise process selected Model 2 (F = 79.64, p = .000) as the best explanatory model for predicting the frequency of use of *Direct Language-Learning Strategies* (*Memory, Cognitive, and Compensation Language-Learning Strategies*). The predictors explained 43.8% of the variance. The two significant predictors *Motivational Intensity* (t = 5.42, p = .000, β = *.41*) and *Desire to Learn the Language* (t = 4.13, p = .000, β = .31) were found to have a significant effect on the

frequency of use of *Direct Language-Learning Strategies*. Chamot and O'Malley (1990) found that the more experienced the language learner, the more motivated they were to use many different types of language-learning strategies, especially *Cognitive Language-Learning Strategies*. This may be because students who really want to learn the target language are motivated to use many different techniques directly related to memorization, note taking, and compensation.

Indirect language-learning strategies. Model 3 ($F = 79.72$, $p = .000$) was chosen as the best explanatory model for predicting the frequency of use of *Indirect Language-Learning Strategies* (*Metacognitive, Affective and Social Language-Learning Strategies*). The three explanatory variables explained 53.7% of the variance. *Motivational Intensity* ($t = 6.48$, $p = .000$, $\beta = .44$) was the most important predictor followed by *Desire to Learn the Language* ($t = 5.11$, $p = .000$, $\beta = .35$) and *college major IT*, which had an inverse relationship ($t = -3.06$, $p = .003$, $\beta = -.15$). The inverse relationship between college majors IT and indirect language-learning strategies indicated the greater the amount of respondents who were IT majors, the lower the reported frequency of use of indirect language-learning strategy.

Wenden (1999) found that motivated language-learners had frequent use of Indirect language-learning strategies, especially *Metacognitive Language-Learning Strategies*. However, Oxford (1990) and Wenden (1999) warned about putting too much emphasis on *Metacognitive Language-Learning Strategies*. Although these findings in this study were consistent with prior research, there might be some external factors such as beliefs, self-efficacy, and culture that may encourage the choice of language-learning strategies and its frequency of use (Khalil, 2005; Oxford, 1990; Tercanlioglu, 2004).

Memory Language-Learning Strategies. Model 4 (F = 29.62, p = .000) was selected as the best explanatory model for predicting the frequency of use of *Memory Language-Learning Strategies*. *Motivational Intensity, gender (female), years spent studying the language,* and *number of languages spoken were* significant explanatory variables of the frequency of use of memory language-learning strategies by English-speaking college students learning a romance language.

Motivational Intensity (t = 9.57, p = .000, β = .56) was the most important predictor, followed by g*ender (female)* (t =2.48, p = .014, β = .14). The third significant predictor was y*ears spent studying the language* (t = -2.43, p = .016, β = *-.14*), which reflected an inverse relationship. This inverse relationship indicated that the fewer years spent studying the language, the greater the reported use of *Memory Language-Learning Strategies*. The last significant predictor was *number of languages spoken* (t = -2.05, p = .042, β = -.12). This predictor also had an inverse relationship, indicating the higher the number of languages respondents knew, the lower the use of *Memory Language-Learning Strategies.* This was consistent with studies which found a strong correlation between *Motivation*, gender, years spent studying a language, and number of languages spoken as explanatory variables for the frequency of use of *Memory Language-Learning Strategies* (Khalil, 2005; Oxford, 1990; Shmais, 2003).

In a study conducted by Shmais (2003) exploring language-learning strategy use of university language-learners in Palestine, results indicated less proficient students used *Affective Language-Learning Strategies* (t = -2.33, $p < .05$) and other (t = -1.99, $p < .05$) strategies more frequently in order to lower their anxiety and encourage themselves to store and retrieve information. Although less proficient students, especially sophomores

used *Memory and* other *strategies* frequently, such strategies were not frequently used by students who had more experience learning a language (Shmais, 2003). The inverse relationship found in this study showed that as respondents' years spent studying a language and the number of languages spoken increased, the frequency of use of *Memory Language-Learning Strategies* decreased. These findings supported prior studies where females were reported having higher frequency of strategy use than male students (Oxford & Nyikos, 1989; Oxford, 1990; Oxford & Erhman, 1995; Oxford & Green, 1995). On the other hand, factors related to gender differences remained the most inconsistent and illusive (El-Dib, 2004; Tercanlioglu, 2004).

Cognitive language-learning strategies. The stepwise process selected Model 4 ($F = 59.57$, $p = .000$) as the best explanatory model for predicting the frequency of use of *Cognitive Language-Learning Strategies*, and the explanatory variables explained 51.2% of the variance. The results of the regression analysis showed, in order of importance, *Desire to learn the Language* ($t = 5.47$, $p = .000$, $\beta = .39$), *Motivational Intensity* ($t = 5.00$, $p = .000$, $\beta = .35$), Race (Asian) ($t = -2.96$, $p = .003$, $\beta = -.14$), and Race (Hawaiian) ($t = -2.29$, $p = .023$, $\beta = -.11$) were significant explanatory variables of the frequency of use of *Cognitive* Language-Learning Strategies. *Desire to Learn the Language* and *Motivational Intensity* subscales were consistent with studies that showed motivation as a strong factor to the frequency of use of *Cognitive Language-Learning Strategies* (El-Dib, 2004; Oxford & Erhman, 1995; Shmais, 2003). This study showed race as an explanatory variable of the frequency of use of *Cognitive Language-Learning Strategies*. The inverse relationship indicated that an increase in the frequency in the number of Asian or Hawaiians respondents in the study was associated with a decrease in frequency of use of *Cognitive*

Language-Learning Strategies. Oxford and Burry-Stock (1995) conducted research which compared six sets of data from Puerto Rico, Taiwan, China, Japan, Egypt, and the United States. The purpose of that study was to support the *SILL* as a valid and reliable research tool, and to relate using certain learning strategies to certain cultures (Oxford & Burry-Stock, 1995). Because race can be closely related to certain cultural tendencies, it was noted by Oxford (1995) that a factor entitled "active naturalistic language use" explained the most variance in Puerto Rico (a hybrid context), China, Japan, and the United States (El-Dib, 2004). Thus, El-Dib attempted to provide another set of data to identify those factors present in Kuwait, and to determine whether they were in contrast or similar to those found in Puerto Rico, China, Japan, and the United States (El-Dib, 2004). Like El-Dib (2004) this study noticed the uniqueness of certain language-learning tasks and how race may influence the type of strategies used by language-learners.

Compensation language-learning strategies. Model 2 ($F = 8.37$, $p = .000$) was selected through the stepwise process as the best explanatory model for predicting the frequency of use of *Compensation Language-Learning Strategies. Motivational Intensity and college majors were* significant predictors that explained 7.5% of the variance. The results of the regression analysis showed *Motivational Intensity* ($t = 3.06$, $p = .002$, $\beta = .21$) was the most important predictor followed by *college majors (Management)* ($t = 2.59$, $p = .010$, $\beta = .17$). Again, consistent with research, *Motivational Intensity* displayed consistency as an explanatory variable for the frequency of use of language-learning strategies (El-Dib, 2004; Khalil, 2005; Oxford & Nyikos, 1989; Oxford, 1990; Oxford & Erhman, 1995; Oxford & Green, 1995; Shmais, 2003; Tercanlioglu, 2004).

Metacognitive language-learning strategies. The stepwise method selected Model 4 ($F = 86.54$, $p = .000$) as the best explanatory model for predicting the frequency of use of *Metacognitive Language-Learning Strategies*, and the four predictors explained 62.5% of the variance. The results of the regression analysis showed *Motivational Intensity* $t = 6.89$, $p = .000$, $\beta = .43$), *Desire to Learn the Language* ($t = 3.94$, $p = .000$, $\beta = .30$), *Attitudes Toward Learning the Language* ($t = 2.19$, $p = .030$, $\beta = .15$), and *College majors IT* ($t = -2.26$, $p = .025$, $\beta = -.10$) were explanatory variables of the frequency of use of *Metacognitive Language-Learning Strategies Language-Learning Strategies*. Again, all three sub-scales of *Motivation* were explanatory variables of the frequency of use of *Metacognitive Language-Learning Strategies*. Results in this study were consistent with other studies that show motivated learners use more strategies that require planning and evaluating learning (metacognitive strategies) (El-Dib, 2004; Chamot & O'Malley, 1990; Khalil, 2005; Oxford, 1990; Oxford & Green; Wenden, 1999; Tercanlioglu, 2004). In a study conducted by El-Dib (2004) to identify differences in strategy use according to culture, gender, and language level among students, the findings supported the proposition that social context is probably the strongest variable influencing language-learners to use certain strategies more than others (El-Dib, 2004). The inverse relationship presented by college majors indicated the more respondents who were IT majors the fewer *Metacognitive Language-Learning Strategies* were reported used. This may be due to the social context in which IT majors find themselves and the nature of working in the technical field.

Affective language-learning strategies. The stepwise method selected Model 2 ($F = 18.95$, $p = .000$) as the best explanatory model for predicting the frequency of use of

Affective Language-Learning Strategies, and the two predictors explained 15.4% of the variance in the model. Again, *Motivational Intensity* (t = 5.89, p = .000, β = .38), and Race *(White)* (t =2.14, p = .033, β = .14) were the most important predictors in explaining the frequency of use of *Affective Language-Learning Strategies*. While the majority of the English-speaking college students learning a romance language were white (83.5%)and this may have affected results, the emergence of race as an explanatory variable also suggests a greater use in *Affective Language-Learning Strategies* among white students in comparison to non-white students. In a study conducted on Palestinians learning English as a foreign language, results indicated less proficient students used *Affective* (t = -2.33, p < .05) and *other* (t = -1.99, p < .05) *Language-Learning Strategies* more frequently in order to lower their anxiety and encourage themselves to store and retrieve information (Shmais, 2003).

Social language-learning strategies. The stepwise method selected Model 3 (F = 47.13, p = .000) as the best explanatory model for the frequency of use of *Social Language-Learning Strategies*, and the three predictors explained 40.5% of the variance. The results of the regression analysis, in order of importance, showed *Desire to Learn the Language* (t = 4.81, p = .000, β = .37), *Motivational Intensity* (t =4.05, p = .000, β = .31), *and College major (IT)* (t = -2.87, p = .005, β = *-.16*) were significant explanatory variables of the frequency of use of *Social Language-Learning Strategies* among respondents in the study. This is consistent with studies that depicted students who had a strong desire to learn the language and were motivated used many different strategies, including *Social Language-Learning Strategies* (El-Dib, 2004). The inverse relationship for college majors indicated the greater the frequency of IT majors, the lower the use of

Social Language-Learning Strategies. As previously stated, this may reflect the personality types of those drawn to the IT field.

Hypotheses

Multiple regression analyses using the stepwise method (H1) were used to examine whether demographic characteristics, language-learning experience, motivation, and frequency of use of language-learning strategies (*Memory, Cognitive, Compensation, Metacognitive, Affective,* and *Social strategies*) were significant explanatory variables of the expected course grade of English-speaking college students learning a romance language. Multiple regression analyses using the hierarchical (forward) method (H2) were used to examine the order of importance of the six language-learning strategies in predicting the expected course grade of English-speaking college students learning a Romance language. Independent *t*-tests (H3) were used to test whether women had significantly higher frequencies of use of language-learning strategies compared to men. The following provides interpretations related to the findings in Chapter IV.

Hypothesis 1: Demographic Characteristics, Language-Learning Experience, Motivation, and Frequency of Use of Language-Learning Strategies

Hypothesis 1 tested to see if demographic characteristics, language-learning experience, motivation and frequency of use of language-learning strategies were significant explanatory variables of expected course grades. Multiple regression analysis was used and the *F* value (16.84) indicated that *Attitudes Toward Learning the Language, years spent studying the language, Motivational Intensity,* and *Affective Language-Learning Strategies* were significant predictors of expected course grade ($p = .00$). The standardized beta coefficient (β) of the five predictors indicated their order of importance

in explaining expected course grade. *Motivational Intensity* was the most important predictor (t = 3.89, p = .000, β = .32) of expected course grades. The amount of *years spent studying the language* (t =3.18, p = .002, β = .19) was the second most important predictor of expected course grade. The third predictor of expected course grade was *Attitudes Toward Learning the Language* (t = 2.32, p = .021, β = .19). The next two predictors had inverse relationships with expected course grade. The first inverse relationship was the respondents' *grade level.* As the grade level decreased (t = -2.65, p = .009, β = -.17) the reported expected course grades increased. The second inverse relationship that was an important predictor of expected course grade was *Affective Language-Learning Strategies* (t = -2.47, p = .014, β = -.16). The less *Affective Language-Learning Strategies* used, the higher the expected course grades. Based on these results H_1 was partially supported and somewhat consistent with other studies. It has been stated that highly motivated learners use more language-learning strategies (Chamot & O'Malley, 1990; Khalil, 2005; Oxford, 1990; Oxford & Green 1995). Language learners with a higher frequency of language-learning strategy use are said to be good students, measured by grade point average (Chamot & O'Malley, 1990; El-Dib, 2004; Khalil, 2005; Oxford, 1990; Oxford & Green 1995; Shmais, 2003; Tercanlioglu, 2004; Wenden, 1999). This study is consistent with the aforementioned studies in terms of the importance of the sub-scales of the *Motivation* construct on expected course grade. Reports from a study by El-Dib (2004) indicated a tendency among the least proficient students to use *Affective Language-Learning Strategies* in order to help deal with tension related to learning a foreign language (El-Dib, 2004).

Hypothesis 2: The Order of Importance of Language-Learning Strategies in Predicting the Expected Course Grade of English-Speaking College Students Learning a Romance Language

The goal of this hypothesis was to test whether the hypothesized order of importance of the six language-learning strategies in predicting the expected course grade of English-speaking college students studying a romance language did in fact reflect the actual relative importance of each of the strategies in predicting expected course grade. The enter method was used with each strategy entered hierarchically into a separate block in the hypothesized order. Using this method produced six models, with an additional strategy being added until all six were included in model 6. All of the models produced had significant F values, and the t statistic for both was significant for the constant. Model 6 ($F = 9.85$, $p = .000$) was selected as the best explanatory model for predicting expected course grades according to the order of language learning strategy. Results of the regression analyses showed H2 was partially supported because only *Metacognitive* and *Affective Language-Learning Strategies* were explanatory variables of expected course grade, while *Social*, *Cognitive*, *Memory*, and *Compensation Language-Learning Strategies* were included in the model but were not significant. This is partially consistent with studies that viewed *Metacognitive Language-Learning Strategies* as explanatory variable of expected course grade or language proficiency (Chamot & O'Malley, 1990; El-Dib, 2004; Khalil, 2005; Oxford, 1990; Oxford & Green 1995; Shmais, 2003; Tercanlioglu, 2004; Wenden, 1999). However, the results were somewhat in contrast to Shmais (2003) that found students with high proficiency levels (those whose averages were more that 80%, the juniors, and those whose self efficacy was very

good used more *Cognitive Language-Learning Strategies* than less proficient students. Although Shmais and other studies have revealed the importance of *Cognitive* and *Metacognitive Language-Learning Strategies* to language-learning achievement, Shmais' study also showed that the less proficient students used *Affective Language-Learning Strategies.*

Hypothesis 3: Differences in the Frequency of Use of Language-Learning Strategies Between Male and Female English-Speaking College Students Learning a Romance Language

Seven independent samples *t*-tests were conducted to test whether female English-speaking college students learning a romance language had significantly higher frequencies of use of language-learning strategies (total *SILL* score and each individual strategy) than their male counterparts. H3 was supported for all strategy types except *Compensation* and *Affective Language-Learning Strategies.* According to Shmais (2003), the effects of gender and proficiency on strategy use appear to be inconsistent with other studies, since the Shmais study indicated no significant differences, while others had found significant differences (Oxford, 1990; Oxford & Green, 1995, Khalil, 2005). Factors related to gender differences remained the most inconsistent and illusive (El-Dib, 2004; Tercanlioglu, 2004). In a previous study conducted by El-Dib no significant differences between males and females were found among the six categories of the *SILL.* However, El-Dib (2004) found males used factor one (active naturalistic language) significantly more than females. Females were found to use factor three (cognitive-compensatory) and factor five (repetition-revision strategies) significantly

more than males (El-Dib, 2004). Thus, females used certain language-learning strategies more frequently then males (El-Dib, 2004; Tercanlioglu, 2004).

Practical Implications

1 This study contributes to scholarly knowledge about motivation, language-learning strategies and second language acquisition. Knowledge about the relationship between motivation, language-learning strategies, and course performance of English-speaking college students learning a romance language may have practical implications for the language-learning classroom.

2. The results from this study can assist with the implementation of language-learning strategies in the form of professional development for language teachers, professors, and other instructional staff within the secondary education level.
3. This study may further awareness and use of students' language-learning strategy in the language-learning classroom.
4. Knowledge about the relationship between motivation, language-learning strategies, and course performance of English-speaking college students learning a romance language would also encourage the teaching of language-learning strategies and the creation of external motivational techniques to assist students with the language-acquisition process.
5. There can be explicit teaching of language-learning strategies in the classroom with the implementation of a motivation or personality type indicator to give students some control over their learning process in the foreign language classroom.

Conclusions

The socio-educational second language acquisition (SLA) model by Krashen (1987) is comprised of five hypotheses that focus on how the comprehensible input of a target language increases knowledge, thus increasing language acquisition. This model contains components influenced by the motivation of the language learner (Krashen, 1987, 2004). Gardner's motivational model, composed of both integrativeness and instrumental motivation, was based on Mowrer's (1959) concept of identification, which was used to explain a child's motivation to learn a parent's language (Gardner, 1985, 2005). According to Bandura (1992) and other researchers, having access to appropriate strategies is a component of motivation that leads the student to higher expectations of learning success.

This study analyzed the *Motivation* segment of the *AMTB* using responses from the English-speaking college students learning a Romance language who were present and voluntarily participated in the study. However, scores from the third sub-scale within the *Motivation* construct suggested that females had better *Attitudes Toward Learning the Language* than their male counterparts. The *Motivation* construct by Gardner (1985) has been criticized as lacking the cognitive aspects of motivation, which have been shown to positively contribute to the motivation of second language learners (Dornyei, 1990; Pintricht, 2003). It is possible a component of motivation not measured in this study, perceived self-efficacy, might also explain how students respond to the items pertaining to their feelings, emotions, and attitudes towards learning a romance language (Bandura, 1992; Zimmerman, 1997). This would possibly make the scale a stronger construct for measuring the motivation of English-speaking college students.

This study also found that the *Motivational Intensity* subscale was included in the regression models as a strong predictor of the frequency of use of language-learning strategies, making it an explanatory variable of language-learning strategy use. Motivation has been shown in previous studies to be the most powerful influence on the selection and the frequency of use of language-learning strategies (Oxford & Nyikos, 1989). Although motivation has been shown to have an effect on the frequent use of language-learning strategies, it was said not always to have been a predictor of second language acquisition when culture is introduced as a variable (Rueda & Chen, 2005).

Oxford's (1990) *Strategy Inventory for Language Learners* (*SILL*) is based on psychological differences, techniques, and skills chosen by students to learn a language, and supports the proposition that "good language learners" use many language-learning strategies. In this study, several of the *SILL* items did not correlate well with each other. Some of the questions may be need to be rephrased, taking into consideration technological advancements in language study, new methods of learning, students' beliefs, and cultural tendencies. A factor renamed by Oxford (1995) called "*Active naturalistic language use"* was the number one factor explaining the most variability in the SILL (El-Dib, 2004). The findings in that study supported the assumption that social context is probably the strongest variable influencing language learners to use certain strategies more than others (El-Dib, 2004).

Sample size may have also affected the psychometric results of this study. Based on a population size of 697, according to Gay and Airasian (2001), an adequate sample size would be 248, but a sample size of 500 would be an even more confident sample size. The data-producing sample of 255 in this study was on the low end of this

recommendation. Other studies with better correlations used larger sample sizes. For example, Oxford and Nyikos (1989) surveyed 1,200 students in their study, and Khalil (2005) surveyed 378 students. This limitation might explain the 14 corrected item-total *SILL* correlations below .40 found in this study.

In this study the order of language-learning strategies was tested (Hypothesis 2) to see if the predictive order of such strategies did in fact reflect the actual relative importance of each of the strategies in predicting expected course grade. Results of the hierarchical (enter method) multiple regression depicted that only *Metacognitive* and *Affective Language-Learning Strategies* were explanatory variables of expected course grade, while *Social*, *Cognitive*, *Memory* and *Compensation Language-Learning Strategies* were included in the model but were not significant. While these findings seem to appear contrary to previous research, findings were also partially supported by others. Wenden (1999) found *Metacognitive Language-Learning Strategies* as an explanatory variable of "good" language learners with good grades in the target language, but cautioned against overemphasizing the importance of *Metacognitive Language-Learning Strategies* due to variables that may be suppressed or not present at the time of a study. Oxford and Nyikos (1989) also found *Metacognitive Language-Learning Strategies* to be an important factor in the academic achievement of language-learners. Additionally, they found females used *Social strategies* more than males. In terms of the order of importance of language-learning strategies, *Affective* strategies were seen last or next to last, with *Metacognitive* strategies first, or *Cognitive* strategies first, depending on the context of the sample and the study (Oxford & Crookall, 1989; Oxford & Erhman, 1989; Oxford & Nyikos, 1989). Consistent with research, *Metacognitive Language-Learning*

Strategies was to be an explanatory variable of expected course grade (Bandura, 1989; Chamot & O'Malley, 1990). *Metacognitive Language-Learning Strategies*, also seen as a higher critical thinking skill, has been found to have a greater influence on language-learning achievement than other strategies (Chamot & O'Malley, 1990; Khalil, 2005; Oxford, 1990; Oxford & Green; Wenden, 1999). Other studies have also found a significant relationship between language-learning strategies and language-learning proficiency (El-Dib, 2004; Khalil, 2005; Oxford & Green 1995; Oxford, 1990; Shmais, 2003; Wenden, 1999).

The suggestion that women use more language-learning strategies than men has been continuously studied with different results. This study demonstrated that female English-speaking college students have a higher frequency of use of language-learning strategies than their male counterparts. Females had higher frequency of use of almost every language-learning strategy except for *Compensation* and *Affective Language-Learning Strategies*. Several studies have shown significant differences in overall strategy use between genders. One study found women exhibited greater frequency of overall strategy use than did men (Khalil, 2005); another found men to exhibit greater frequency use of strategies than did women (Tercanlioglu, 2004). Tercanlioglu attributed these results to the culture of a male-dominated Turkish society, and the possible effect of lower self-esteem among female students on reported strategy use. Some other studies proposed that culture might contribute to the types of strategies favored by men or women (El-Dib, 2004; Oxford & Nyikos, 1989). Still other studies found inconsistencies or no significant differences between genders (El-Dib, 2004; Shmais, 2003). Oxford & Nyikos (1989) found that women used different kinds of strategies and favored *Social*

Language-Learning Strategies more than men. Overall, in this study, Hypothesis 3 was supported for the total *SILL,* and was partially consistent with other studies (El-Dib, 2004; Khalil, 2005; Oxford & Nyikos, 1989; Oxford, 1990; Oxford & Erhman, 1995; Oxford & Green, 1995; Wenden, 1999).

A proposition about demographic characteristics, language-learning experience, motivation, and frequency of use of language-learning strategies (*Memory, Cognitive, Compensation, Metacognitive, Affective,* and *Social strategies*) as explanatory variables of expected course grade was tested as Hypothesis 1 in this study. Results in this study demonstrated *Attitudes Toward Learning the Language*, *years studying the language*, *Motivational Intensity* and *Affective Language-Learning Strategies* were significant predictors of expected course grade. These results showed Hypothesis 1 was partially supported, yet somewhat in contrast to research examining the relationship between these variables and foreign language achievement (expected course grade or grade point average) (Baker, 2001; Gardner, 1985; Gardner et al., 1997; Oxford & Erhman, 1995).

The results also suggest that as *Motivational Intensity* increases, the frequency of use of certain language-learning strategies increases, but that the effect occurs more in females than in males. Findings indicated 86.7% of students reported B (3.0) or higher for expected course grade. In terms of gender differences, the average female expected course grade fell between a B+ and an A-, while the average expected course for males was between a B and a B+. This suggests that women expected to perform better in their romance language-learning classroom than the men did. These findings were consistent with prior research which depicted women using more language-learning strategies than

men, thus performing better in their language-learning classroom (Oxford & Green, 1995; Oxford & Nyikos, 1989; Oxford, 1994).

Language-learning strategies and motivation have been identified as major variables associated with second language acquisition (course performance or proficiency) (Bandura, 1989; Chamot & O'Malley, 1990; Gardner, 1985; Gardner, Masgoret, & Tremblay, 1997; Hashimoto, 2002; Onwuegbuzie, Bailey, & Daley, 2000; Oxford, 1990; Rubin, 1975; Wenden, 1999; Zimmerman, 1990). In this study differences in expected course grade according to *Motivation* and *Language-Learning Strategies* were not analyzed since both of these variables involved creating categories for ranges of continuous scores. However multiple regression analysis with stepwise method revealed that *Motivational Intensity* was a consistent explanatory variable and a significant predictor for the total *SILL*, direct, indirect, and its individual strategies. These findings appear to be consistent with research that mentions the influence of motivation on the selection of language-learning strategies (Oxford & Nyikos, 1989; Oxford, 1990; Oxford & Green, 1995).

This study further demonstrated that duration of language study positively affects learner's use of strategies (Khalil, 2005). The opportunity to practice a wide variety of strategies appropriate to the different instructional tasks and activities are part of the L2 learning classroom experience (El-Dib, 2004; Khalil, 2005; Oxford, 1990; Wenden, 1999). The results in this study also suggested that motivation is an essential part of the frequency of use of language-learning strategies (Oxford, 1990). Certain demographic characteristics do have an effect on the type of language-learning strategies used by a language learner, such as gender (Oxford, 1990). Overall, language

experience, motivation, and language-learning strategies are essential elements in the second-language classroom of English-speaking college students learning a romance language.

Limitations

1. This study looked only at the motivation, language-learning strategies, and course performance of English-speaking college students learning a romance language.
2. The external validity of the study is limited and the findings cannot be generalized to the overall population of English-speaking college students learning a romance language.
3. This study was limited to English-speaking college students learning a romance language in Northern Virginia at George Mason University. Students whose primary language was not English were not included.
4. This study could not include all members of the targeted population because accessibility to the targeted population was limited to members whose instructors agreed to allow their students to participate in the study.
5. The final data-producing sample was self-selected, introducing a selection bias, which represents a threat to external validity.
6. Relationships between variables were limited to what could be discovered using multiple regression analyses. There may have been additional relationships between demographic characteristics, language-learning experience, motivation, and language-learning strategies. Other methods of data analysis, such as structural equation modeling, might have provided additional information about the relationships between the variables in this study. Interviews would have also

been beneficial in depicting extrinsic and intrinsic motivational and language-learning techniques not surveyed by the instruments but used by the students.

7. Analysis of new factors was limited to looking at the emergence of new factors. There may be significant relationships between demographic characteristics, language-learning experience, motivation, language-learning strategies, and the new factors.

Recommendations for Future Study

1. The effects of demographic characteristics, language-learning experience, motivation, and language-learning strategies on expected course grade can be examined and compared between two universities, one private and the other public, to see if significant differences exist between the different learning environments. The same study can be conducted as a comparative study to see whether significant differences exist between romance and non-romance languages.
2. This same study could be conducted as an experimental study with a control group, to get the best possible significant explanatory variable for the frequency of use of language-learning strategies and motivation.
3. It is recommended that future study examine whether or not demographic characteristics, language-learning experience, and language-learning strategies are explanatory variables of motivation.
4. Further analysis of each individual factor for the SILL and the Motivation construct should be conducted.

5. This study should be conducted using the survey as a pre-test and post-test, testing the consistency of the self-reported responses and expected course grade of English-speaking college students learning a romance language.
6. In the future it is recommended that this study be done using a mixed method approach to include interviewed explanations for language-learning strategy use and motivation.
7. Further examination of the *Affective Language-Learning Strategies* is needed in relationship to the types of anxiety and its effect on expected course grade.
8. Additionally, future study should examine how culture effects language learners' integrative and instrumental motivation and their choice of language-learning strategies.

The purpose of this study was to add to the knowledge about motivation, language-learning strategies, and course performance among English-speaking college students learning a Romance language. Chapter V discussed the results of analyses related to answering the research questions and testing the hypotheses that flowed from the research purposes of this study. Findings were interpreted in light of the review of literature and review of instrumentation. Implications for theory and practice, as well as the conclusions drawn from interpretations were also discussed. The limitations of the study and recommendations for future study were addressed.

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Appendix A

Survey (Spanish Class Version)

Second Language Acquisition Survey (Spanish Class Version)

Part I: Demographic Characteristics

Instructions: Please fill in the blank or check the answer that best describes you.

1. Gender: ☐ Male ☐ Female

2. Age in years: _____

3. College Grade Level: ☐ Freshman ☐ Sophomore ☐ Junior ☐ Senior

4. College Major: _____ ☐ Undecided

5. Race: Select the primary race you consider yourself to be.

☐ White ☐ Black or African American ☐ Asian

☐ American Indian or Alaska Native

☐ Native Hawaiian or other Pacific Islander

6. Ethnicity

☐ Hispanic or Latino ☐ Not Hispanic or Latino

Part II: Language Learning Experience and Expected Course Grade

Instructions: Please fill in the blank or place a check or an x next to the answer that best applies to you.

1. What is your primary language? _____

2. How many languages do you speak in addition to your primary language? _____
(If you speak only one language, the answer should be zero (0). If you speak two languages the answer should be one (1), etc.).

3. How many years have you studied (insert romance language)? _____ years

4. What is your expected course grade in this course?

☐ A or A+ (4.0) ☐ A- (3.67) ☐ B+ (3.33) ☐ B (3.0) ☐ B- (2.67)

☐ C+ (2.33) ☐ C (2.0) ☐ C- (1.67) ☐ D (1.0) ☐ F (0.0)

Part III: Motivation

Instructions: Please answer the following items by circling the answer that best applies to you. Please do not spend too much time thinking about the answer, yet, do not be careless, as it is important that we obtain your true feelings.

1. I actively think about what I have learning in my Spanish class:
   a) very frequently
   b) hardly ever.
   c) once in a while.

2. If Spanish were not taught in school, I would:
   a) pick up Spanish in everyday situations (i.e. read Spanish books and newspaper, try to speak it whenever possible, etc.)
   b) not bother learning Spanish at all.
   c) try to obtain lessons in Spanish somewhere else.

3. When I have a problem understanding something we are learning in Spanish class, I:
   a) immediately ask the professor for help.
   b) only seek help just before the exam.
   c) just forget about it.

4. When it comes to Spanish homework, I:
   a) put some effort into it, but not as much as I could.
   b) work very carefully, making sure I understand everything
   c) just skim over it.

5. Considering how I study Spanish, I can honestly say that I:
   a) do just enough work to get along
   b) will pass on the basis of sheer luck or intelligence because I do very little work.
   c) really try to learn Spanish

6. If my professor wanted someone to do an extra Spanish assignment, I would:
   a) definitely not volunteer.
   b) definitely volunteer.
   c) only do it if the professor asked me directly.

7. After I get my Spanish assignment back, I:
   a) always rewrite them, correcting my mistakes.
   b) just throw them in my desk and forget them.
   c) look them over, but don't bother correcting mistakes.

8. When I am in Spanish class, I:
   a) volunteer answers as much as possible.
   b) answer only the easier questions.
   c) never say anything.

9. If there were a local Spanish T.V. station I would:
   a) listen to the music, paying attention only to the easy words.
   b) listen carefully and try to understand all the words.
   c) change the station.

10. When I hear a Spanish song on the radio, I:
   a) listen to the music, paying attention only to the easy words.
   b) listen carefully and try to understand all the words.
   c) change the station

11. During Spanish class, I would like:
    a) to have a combination of Spanish and English spoken.
    b) to have as much English as possible spoken.
    c) to have only Spanish spoken

12. If I had the opportunity to speak Spanish outside of school, I would:
    a) never speak it
    b) speak Spanish most of the time, using English only if really necessary.
    c) speak it occasionally, using English whenever possible.

13. Compared to my other courses, I like Spanish:
    a) the most.
    b) the same as all the others
    c) least of all.

14. If there were a Spanish club in my school, I would:
    a) attend meeting once in a while.
    b) be most interested in joining.
    c) definitely not join.

15. If it were up to me whether or not to take Spanish, I would:
    a) would definitely take it.
    b) would drop it.
    c) don't know whether I would take it or not.

16. I find studying Spanish:
    a) not interesting at all.
    b) no more interesting that most subjects.
    d) very interesting

17. If the opportunity arose and I knew enough Spanish, I would watch Spanish TV programs:
    a) sometimes.
    b) as often as possible.
    c) never.

18. If I had the opportunity to see a Spanish play, I would:
    a) go only if I have nothing to do.
    b) definitely go.
    c) not go.

19. If there were Spanish-speaking families in my neighborhood, I would:
    a) never speak Spanish to them.
    b) speak Spanish with them sometimes.
    c) speak Spanish with them as much as possible.

20. If I had the opportunity and knew enough Spanish, I would read Spanish magazines and newspaper:
    a) as often as I could.
    b) never.
    c) not very often.

Part III: Motivation (Continued)

Instructions: Following are a number of statements with which some people agree and others disagree. There are no right or wrong answers since many people have different opinion. Indicate your opinion about each statement by marking the box that best reflects the degree to which you disagree or agree with the statement.

		Strongly Disagree	Moderately Disagree	Slightly Disagree	Neutral/ No opinion	Slightly Agree	Moderately Agree	Strongly Agree
1	Learning Spanish is really great.	☐	☐	☐	☐	☐	☐	☐
2	I really enjoy learning Spanish	☐	☐	☐	☐	☐	☐	☐
3	Spanish is an important part of the school program.	☐	☐	☐	☐	☐	☐	☐
4	I plan to learn as much Spanish as possible	☐	☐	☐	☐	☐	☐	☐
5	I love learning Spanish.	☐	☐	☐	☐	☐	☐	☐
6	I hate Spanish.	☐	☐	☐	☐	☐	☐	☐
7	I would rather spend my time on subjects other that Spanish.	☐	☐	☐	☐	☐	☐	☐
8	Learning Spanish is a waste of time	☐	☐	☐	☐	☐	☐	☐
9	I think that learning Spanish is dull.	☐	☐	☐	☐	☐	☐	☐
10	When I leave school, I shall give up the study of Spanish entirely because I am not interested in it.	☐	☐	☐	☐	☐	☐	☐

Note. The scale is from *Social psychology and second language learning: The role of attitudes and motivation*, by R. C. Gardner, 1985, London, England: Edward Arnold. Reprinted with permission of the copyright holder.

Part IV: Language Learning Strategies

Instructions: You will find statements about learning Spanish. Please read each statement and put an X in the box that tells how true the statement is.

Answer in terms of how well the statement describes you. Please do not answer how you think you should be, or what other people do. There are not right or wrong answers to these statements. This questionnaire usually takes about 20 – 30 minutes to complete. If you have any questions, let the teacher know immediately.

		Never or almost never true of me	Usually not true of me	Somewhat true of me	Usually true of me	Always or almost always true of me
1	I think of relationships between what I already know and new thing I learn in Spanish.	☐	☐	☐	☐	☐
2	I use new Spanish words in a sentence so I can remember them.	☐	☐	☐	☐	☐
3	I connect the sound of a new Spanish word and an image or picture of the word to help me remember the word.	☐	☐	☐	☐	☐
4	I remember a new Spanish word by making a mental picture of a situation in which the word might be used.	☐	☐	☐	☐	☐
5	I use rhymes to remember new Spanish words.	☐	☐	☐	☐	☐
6	I use flashcards to remember new Spanish words.	☐	☐	☐	☐	☐
7	I physically act out new Spanish words.	☐	☐	☐	☐	☐
8	I review Spanish lessons often.	☐	☐	☐	☐	☐
9	I remember new Spanish words or phrases by remembering their location on the page, on the board, or on a street sign	☐	☐	☐	☐	☐
10	I say or write Spanish words several times.	☐	☐	☐	☐	☐
11	I try to talk like native Spanish speakers.	☐	☐	☐	☐	☐
12	I practice the sounds of Spanish.	☐	☐	☐	☐	☐

		Never or almost never true of me	Usually not true of me	Somewhat true of me	Usually true of me	Always or almost always true of me
13	I use the Spanish words I know in different ways.	☐	☐	☐	☐	☐
14	I start conversations in Spanish.	☐	☐	☐	☐	☐
15	I watch Spanish language TV shows spoken in Spanish or go to movies spoken in Spanish.	☐	☐	☐	☐	☐
16	I read for pleasure in Spanish	☐	☐	☐	☐	☐
17	I write notes, messages, letters, or reports in Spanish.	☐	☐	☐	☐	☐
18	I first skim an Spanish passage then go back and read carefully.	☐	☐	☐	☐	☐
19	I look for words in my own language that are similar to new words in Spanish .	☐	☐	☐	☐	☐
20	I try to find patterns in Spanish	☐	☐	☐	☐	☐
21	I find the meaning of an Spanish word by dividing it into parts that I understand	☐	☐	☐	☐	☐
22	I try not to translate word for word	☐	☐	☐	☐	☐
23	I make summaries of information that I hear or read in Spanish	☐	☐	☐	☐	☐
24	To understand unfamiliar Spanish words, I make guesses.	☐	☐	☐	☐	☐
25	When I can't think of a word during a conversation in Spanish, I use gestures	☐	☐	☐	☐	☐
26	I make up new words if I do not know the right ones in Spanish.	☐	☐	☐	☐	☐
27	I read Spanish without looking up every new word.	☐	☐	☐	☐	☐
28	I try to guess what the other person will say next in Spanish.	☐	☐	☐	☐	☐
29	If I can't think of a Spanish word, I use a word or phrase that means the same thing.	☐	☐	☐	☐	☐
30	I try to find as many ways as I can to use my Spanish.	☐	☐	☐	☐	☐
31	I notice my Spanish mistakes and use that information to help me do better.	☐	☐	☐	☐	☐

		Never or almost never true of me	Usually not true of me	Somewhat true of me	Usually true of me	Always or almost always true of me
32	I pay attention when someone is speaking Spanish.	☐	☐	☐	☐	☐
33	I try to find out how to be a better learner of Spanish .	☐	☐	☐	☐	☐
34	I plan my schedule so I will have enough time to study Spanish.	☐	☐	☐	☐	☐
35	I look for people I can talk to in Spanish.	☐	☐	☐	☐	☐
36	I look for opportunities to read as much as possible in Spanish.	☐	☐	☐	☐	☐
37	I have clear goals for improving my Spanish skills	☐	☐	☐	☐	☐
38	I think about my progress in learning Spanish.	☐	☐	☐	☐	☐
39	I try to relax whenever I feel afraid of using Spanish.	☐	☐	☐	☐	☐
40	I encourage myself to speak Spanish even when I am afraid of making a mistake.	☐	☐	☐	☐	☐
41	I give myself a reward or treat when I do well in Spanish.	☐	☐	☐	☐	☐
42	I notice if I am tense or nervous when I am studying or using Spanish.	☐	☐	☐	☐	☐
43	I write down my feelings in a language learning diary	☐	☐	☐	☐	☐
44	I talk to someone else about how I feel when I am learning Spanish.	☐	☐	☐	☐	☐
45	If I do not understand something in Spanish I ask the other person to slow down or say it again.	☐	☐	☐	☐	☐
46	I ask Spanish speakers to correct me when I talk.	☐	☐	☐	☐	☐
47	I practice Spanish with other students	☐	☐	☐	☐	☐
48	I ask for help from Spanish speakers	☐	☐	☐	☐	☐
49	I ask questions in Spanish.	☐	☐	☐	☐	☐
50	I try to learn about the culture of Spanish speakers	☐	☐	☐	☐	☐

Note. The scale is from Language learning strategies: what every teacher should know, pp. 294 –296, version 7.0; by Rebecca Oxford, 1990. Copyright 1990 by Heinle & Heinle publishers. Reprinted with permission of copyright holder.

Appendix B

Survey (French Class Version)

Second Language Acquisition Survey (French Class Version)

Part I: Demographic Characteristics

Instructions: Please fill in the blank or check the answer that best describes you.

1. Gender: ☐ Male ☐ Female

2. Age in years: _____

3. College Grade Level: ☐ Freshman ☐ Sophomore ☐ Junior ☐ Senior

4. College Major: _____ ☐ Undecided

5. Race: Select the primary race you consider yourself to be.

☐ White ☐ Black or African American ☐ Asian

☐ American Indian or Alaska Native

☐ Native Hawaiian or other Pacific Islander

6. Ethnicity

☐ Hispanic or Latino ☐ Not Hispanic or Latino

Part II: Language Learning Experience and Expected Course Grade

Instructions: Please fill in the blank or place a check or an x next to the answer that best applies to you.

1. What is your primary language? _____

2. How many languages do you speak in addition to your primary language? _____
(If you speak only one language, the answer should be zero (0). If you speak two languages the answer should be one (1), etc.).

3. How many years have you studied (insert romance language)? _____ years

4. What is your expected course grade in this course?

☐ A or A+ (4.0) ☐ A- (3.67) ☐ B+ (3.33) ☐ B (3.0) ☐ B- (2.67)

☐ C+ (2.33) ☐ C (2.0) ☐ C- (1.67) ☐ D (1.0) ☐ F (0.0)

Part III: Motivation

Instructions: Please answer the following items by circling the answer that best applies to you. Please do not spend too much time thinking about the answer, yet, do not be careless, as it is important that we obtain your true feelings.

1. I actively think about what I have learning in my French class:
   a) very frequently
   b) hardly ever.
   c) once in a while.

2. If French were not taught in school, I would:
   a) pick up French in everyday situations (i.e. read French books and newspaper, try to speak it whenever possible, etc.)
   b) not bother learning French at all.
   c) try to obtain lessons in French somewhere else.

3. When I have a problem understanding something we are learning in French class, I:
   a) immediately ask the professor for help.
   b) only seek help just before the exam.
   c) just forget about it.

4. When it comes to French homework, I:
   d) put some effort into it, but not as much as I could.
   e) work very carefully, making sure I understand everything
   f) just skim over it.

5. Considering how I study French, I can honestly say that I:
   d) do just enough work to get along
   e) will pass on the basis of sheer luck or intelligence because I do very little work.
   f) really try to learn French

6. If my professor wanted someone to do an extra French assignment, I would:
   d) definitely not volunteer.
   e) definitely volunteer.
   f) only do it if the professor asked me directly.

7. After I get my French assignment back, I:
   d) always rewrite them, correcting my mistakes.
   e) just throw them in my desk and forget them.
   f) look them over, but don't bother correcting mistakes.

8. When I am in French class, I:
   d) volunteer answers as much as possible.
   e) answer only the easier questions.
   f) never say anything.

9. If there were a local French T.V. station I would:
   d) listen to the music, paying attention only to the easy words.
   e) listen carefully and try to understand all the words.
   f) change the station.

10. When I hear a French song on the radio, I:
    a) listen to the music, paying attention only to the easy words.
    b) listen carefully and try to understand all the words.

c) change the station

11. During French class, I would like:
    d) to have a combination of French and English spoken.
    e) to have as much English as possible spoken.
    f) to have only French spoken

12. If I had the opportunity to speak French outside of school, I would:
    d) never speak it
    e) speak French most of the time, using English only if really necessary.
    f) speak it occasionally, using English whenever possible.

13. Compared to my other courses, I like French:
    d) the most.
    e) the same as all the others
    f) least of all.

14. If there were a French club in my school, I would:
    e) attend meeting once in a while.
    f) be most interested in joining.
    g) definitely not join.

15. If it were up to me whether or not to take French, I would:
    a) would definitely take it.
    b) would drop it.
    c) don't know whether I would take it or not.

16. I find studying French:
    a) not interesting at all.
    b) no more interesting that most subjects.
    h) very interesting

17. If the opportunity arose and I knew enough French, I would watch French TV programs:
    d) sometimes.
    e) as often as possible.
    f) never.

18. If I had the opportunity to see a French play, I would:
    d) go only if I have nothing to do.
    e) definitely go.
    f) not go.

19. If there were French speaking families in my neighborhood, I would:
    d) never speak French to them.
    e) speak French with them sometimes.
    f) speak French with them as much as possible.

20. If I had the opportunity and knew enough French, I would read French magazines and newspaper:
    d) as often as I could.
    e) never.
    f) not very often.

Part III: Motivation (Continued)

Instructions: Following are a number of statements with which some people agree and others disagree. There are no right or wrong answers since many people have different opinion. Indicate your opinion about each statement by marking the box that best reflects the degree to which you disagree or agree with the statement.

		Strongly Disagree	Moderately Disagree	Slightly Disagree	Neutral/ No opinion	Slightly Agree	Moderately Agree	Strongly Agree
1	Learning French is really great.	☐	☐	☐	☐	☐	☐	☐
2	I really enjoy learning French	☐	☐	☐	☐	☐	☐	☐
3	French is an important part of the school program.	☐	☐	☐	☐	☐	☐	☐
4	I plan to learn as much French as possible	☐	☐	☐	☐	☐	☐	☐
5	I love learning French.	☐	☐	☐	☐	☐	☐	☐
6	I hate French.	☐	☐	☐	☐	☐	☐	☐
7	I would rather spend my time on subjects other that French .	☐	☐	☐	☐	☐	☐	☐
8	Learning French is a waste of time	☐	☐	☐	☐	☐	☐	☐
9	I think that learning French is dull.	☐	☐	☐	☐	☐	☐	☐
10	When I leave school, I shall give up the study of French entirely because I am not interested in it.	☐	☐	☐	☐	☐	☐	☐

Note. The scale is from *Social psychology and second language learning: The role of attitudes and motivation*, by R. C. Gardner, 1985, London, England: Edward Arnold. Reprinted with permission of the copyright holder.

Part IV: Language Learning Strategies

Instructions: You will find statements about learning French. Please read each statement and put an X in the box that tells how true the statement is.

Answer in terms of how well the statement describes you. Please do not answer how you think you should be, or what other people do. There are not right or wrong answers to these statements. This questionnaire usually takes about 20 – 30 minutes to complete. If you have any questions, let the teacher know immediately.

		Never or almost never true of me	Usually not true of me	Somewhat true of me	Usually true of me	Always or almost always true of me
1	I think of relationships between what I already know and new thing I learn in French.	☐	☐	☐	☐	☐
2	I use new French words in a sentence so I can remember them.	☐	☐	☐	☐	☐
3	I connect the sound of a new French word and an image or picture of the word to help me remember the word	☐	☐	☐	☐	☐
4	I remember a new French word by making a mental picture of a situation in which the word might be used.	☐	☐	☐	☐	☐
5	I use rhymes to remember new French words.	☐	☐	☐	☐	☐
6	I use flashcards to remember new French words.	☐	☐	☐	☐	☐
7	I physically act out new French words.	☐	☐	☐	☐	☐
8	I review French lessons often	☐	☐	☐	☐	☐
9	I remember new French words or phrases by remembering their location on the page, on the board, or on a street sign	☐	☐	☐	☐	☐
10	I say or write French words several times.	☐	☐	☐	☐	☐
11	I try to talk like native French speakers.	☐	☐	☐	☐	☐
12	I practice the sounds of French.	☐	☐	☐	☐	☐

		Never or almost never true of me	Usually not true of me	Somewhat true of me	Usually true of me	Always or almost always true of me
13	I use the French words I know in different ways.	☐	☐	☐	☐	☐
14	I start conversations in French.	☐	☐	☐	☐	☐
15	I watch French language TV shows spoken in French or go to movies spoken in French.	☐	☐	☐	☐	☐
16	I read for pleasure in French	☐	☐	☐	☐	☐
17	I write notes, messages, letters, or reports in French.	☐	☐	☐	☐	☐
18	I first skim an French passage then go back and read carefully.	☐	☐	☐	☐	☐
19	I look for words in my own language that are similar to new words in French .	☐	☐	☐	☐	☐
20	I try to find patterns in French	☐	☐	☐	☐	☐
21	I find the meaning of an French word by dividing it into parts that I understand	☐	☐	☐	☐	☐
22	I try not to translate word for word	☐	☐	☐	☐	☐
23	I make summaries of information that I hear or read in French	☐	☐	☐	☐	☐
24	To understand unfamiliar French words, I make guesses.	☐	☐	☐	☐	☐
25	When I can't think of a word during a conversation in French, I use gestures	☐	☐	☐	☐	☐
26	I make up new words if I do not know the right ones in French.	☐	☐	☐	☐	☐
27	I read French without looking up every new word.	☐	☐	☐	☐	☐
28	I try to guess what the other person will say next in French.	☐	☐	☐	☐	☐
29	If I can't think of a French word, I use a word or phrase that means the same thing.	☐	☐	☐	☐	☐
30	I try to find as many ways as I can to use my French.	☐	☐	☐	☐	☐
31	I notice my French mistakes and use that information to help me do better.	☐	☐	☐	☐	☐

		Never or almost never true of me	Usually not true of me	Somewhat true of me	Usually true of me	Always or almost always true of me
32	I pay attention when someone is speaking French.	☐	☐	☐	☐	☐
33	I try to find out how to be a better learner of French .	☐	☐	☐	☐	☐
34	I plan my schedule so I will have enough time to study French.	☐	☐	☐	☐	☐
35	I look for people I can talk to in French.	☐	☐	☐	☐	☐
36	I look for opportunities to read as much as possible in French.	☐	☐	☐	☐	☐
37	I have clear goals for improving my French skills	☐	☐	☐	☐	☐
38	I think about my progress in learning French.	☐	☐	☐	☐	☐
39	I try to relax whenever I feel afraid of using French.	☐	☐	☐	☐	☐
40	I encourage myself to speak French even when I am afraid of making a mistake.	☐	☐	☐	☐	☐
41	I give myself a reward or treat when I do well in French.	☐	☐	☐	☐	☐
42	I notice if I am tense or nervous when I am studying or using French.	☐	☐	☐	☐	☐
43	I write down my feelings in a language learning diary	☐	☐	☐	☐	☐
44	I talk to someone else about how I feel when I am learning French.	☐	☐	☐	☐	☐
45	If I do not understand something in French I ask the other person to slow down or say it again.	☐	☐	☐	☐	☐
46	I ask French speakers to correct me when I talk.	☐	☐	☐	☐	☐
47	I practice French with other students	☐	☐	☐	☐	☐
48	I ask for help from French speakers	☐	☐	☐	☐	☐
49	I ask questions in French.	☐	☐	☐	☐	☐
50	I try to learn about the culture of French speakers	☐	☐	☐	☐	☐

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Appendix C

Survey (Italian Class Version)

Second Language Acquisition Survey (Italian Class Version)

Part I: Demographic Characteristics

Instructions: Please fill in the blank or check the answer that best describes you.

1. Gender: ☐ Male ☐ Female

2. Age in years: _____

3. College Grade Level: ☐ Freshman ☐ Sophomore ☐ Junior ☐ Senior

4. College Major: _____ ☐ Undecided

5. Race: Select the primary race you consider yourself to be.

☐ White ☐ Black or African American ☐ Asian

☐ American Indian or Alaska Native

☐ Native Hawaiian or other Pacific Islander

6. Ethnicity

☐ Hispanic or Latino ☐ Not Hispanic or Latino

Part II: Language Learning Experience and Expected Course Grade

Instructions: Please fill in the blank or place a check or an x next to the answer that best applies to you.

1. What is your primary language? _____

2. How many languages do you speak in addition to your primary language? _____
(If you speak only one language, the answer should be zero (0). If you speak two languages the answer should be one (1), etc.).

3. How many years have you studied (insert romance language)? _____ years

4. What is your expected course grade in this course?

☐ A or A+ (4.0) ☐ A- (3.67) ☐ B+ (3.33) ☐ B (3.0) ☐ B- (2.67)

☐ C+ (2.33) ☐ C (2.0) ☐ C- (1.67) ☐ D (1.0) ☐ F (0.0)

Part III: Motivation

Instructions: Please answer the following items by circling the answer that best applies to you. Please do not spend too much time thinking about the answer, yet, do not be careless, as it is important that we obtain your true feelings.

1. I actively think about what I have learning in my Italian class:
   a) very frequently
   b) hardly ever.
   c) once in a while.

2. If Italian were not taught in school, I would:
   a) pick up Italian in everyday situations (i.e. read Italian books and newspaper, try to speak it whenever possible, etc.)
   b) not bother learning Italian at all.
   c) try to obtain lessons in Italian somewhere else.

3. When I have a problem understanding something we are learning in Italian class, I:
   a) immediately ask the professor for help.
   b) only seek help just before the exam.
   c) just forget about it.

4. When it comes to Italian homework, I:
   g) put some effort into it, but not as much as I could.
   h) work very carefully, making sure I understand everything
   i) just skim over it.

5. Considering how I study Italian, I can honestly say that I:
   g) do just enough work to get along
   h) will pass on the basis of sheer luck or intelligence because I do very little work.
   i) really try to learn Italian

6. If my professor wanted someone to do an extra Italian assignment, I would:
   g) definitely not volunteer.
   h) definitely volunteer.
   i) only do it if the professor asked me directly.

7. After I get my Italian assignment back, I:
   g) always rewrite them, correcting my mistakes.
   h) just throw them in my desk and forget them.
   i) look them over, but don't bother correcting mistakes.

8. When I am in Italian class, I:
   g) volunteer answers as much as possible.
   h) answer only the easier questions.
   i) never say anything.

9. If there were a local Italian T.V. station I would:
   g) listen to the music, paying attention only to the easy words.
   h) listen carefully and try to understand all the words.
   i) change the station.

10. When I hear a Italian song on the radio, I:
    a) listen to the music, paying attention only to the easy words.
    b) listen carefully and try to understand all the words.
    c) change the station

11. During Italian class, I would like:
    g) to have a combination of Italian and English spoken.
    h) to have as much English as possible spoken.
    i) to have only Italian spoken

12. If I had the opportunity to speak Italian outside of school, I would:
    g) never speak it
    h) speak Italian most of the time, using English only if really necessary.
    i) speak it occasionally, using English whenever possible.

13. Compared to my other courses, I like Italian:
    g) the most.
    h) the same as all the others
    i) least of all.

14. If there were a Italian club in my school, I would:
    i) attend meeting once in a while.
    j) be most interested in joining.
    k) definitely not join.

15. If it were up to me whether or not to take Italian, I would:
    a) would definitely take it.
    b) would drop it.
    c) don't know whether I would take it or not.

16. I find studying Italian:
    a) not interesting at all.
    b) no more interesting that most subjects.
    l) very interesting

17. If the opportunity arose and I knew enough Italian, I would watch Italian TV programs:
    g) sometimes.
    h) as often as possible.
    i) never.

18. If I had the opportunity to see a Italian play, I would:
    g) go only if I have nothing to do.
    h) definitely go.
    i) not go.

19. If there were Italian speaking families in my neighborhood, I would:
    g) never speak Italian to them.
    h) speak Italian with them sometimes.
    i) speak Italian with them as much as possible.

20. If I had the opportunity and knew enough Italian, I would read Italian magazines and newspaper:
    g) as often as I could.
    h) never.
    i) not very often.

Part III: Motivation (Continued)

Instructions: Following are a number of statements with which some people agree and others disagree. There are no right or wrong answers since many people have different opinion. Indicate your opinion about each statement by marking the box that best reflects the degree to which you disagree or agree with the statement.

		Strongly Disagree	Moderately Disagree	Slightly Disagree	Neutral/ No Opinion	Slightly Agree	Moderately Agree	Strongly Agree
1	Learning Italian is really great.	☐	☐	☐	☐	☐	☐	☐
2	I really enjoy learning Italian.	☐	☐	☐	☐	☐	☐	☐
3	Italian is an important part of the school program.	☐	☐	☐	☐	☐	☐	☐
4	I plan to learn as much Italian as possible.	☐	☐	☐	☐	☐	☐	☐
5	I love learning Italian.	☐	☐	☐	☐	☐	☐	☐
6	I hate Italian.	☐	☐	☐	☐	☐	☐	☐
7	I would rather spend my time on subjects other that Italian.	☐	☐	☐	☐	☐	☐	☐
8	Learning Italian is a waste of time.	☐	☐	☐	☐	☐	☐	☐
9	I think that learning Italian is dull.	☐	☐	☐	☐	☐	☐	☐
10	When I leave school, I shall give up the study of Italian entirely because I am not interested in it.	☐	☐	☐	☐	☐	☐	☐

Note. The scale is from *Social psychology and second language learning: The role of attitudes and motivation*, by R. C. Gardner, 1985, London, England: Edward Arnold. Reprinted with permission of the copyright holder.

Part IV: Language Learning Strategies

Instructions: You will find statements about learning Italian. Please read each statement and put an X in the box that tells how true the statement is.

Answer in terms of how well the statement describes you. Please do not answer how you think you should be, or what other people do. There are not right or wrong answers to these statements. This questionnaire usually takes about 20 – 30 minutes to complete. If you have any questions, let the teacher know immediately.

		Never or almost never true of me	Usually not true of me	Somewhat true of me	Usually true of me	Always or almost always true of me
1	I think of relationships between what I already know and new thing I learn in Italian.	☐	☐	☐	☐	☐
2	I use new Italian words in a sentence so I can remember them.	☐	☐	☐	☐	☐
3	I connect the sound of a new Italian word and an image or picture of the word to help me remember the word.	☐	☐	☐	☐	☐
4	I remember a new Italian word by making a mental picture of a situation in which the word might be used.	☐	☐	☐	☐	☐
5	I use rhymes to remember new Italian words.	☐	☐	☐	☐	☐
6	I use flashcards to remember new Italian words.	☐	☐	☐	☐	☐
7	I physically act out new Italian words.	☐	☐	☐	☐	☐
8	I review Italian lessons often	☐	☐	☐	☐	☐
9	I remember new Italian words or phrases by remembering their location on the page, on the board, or on a street sign	☐	☐	☐	☐	☐
10	I say or write Italian words several times.	☐	☐	☐	☐	☐
11	I try to talk like native Italian speakers.	☐	☐	☐	☐	☐
12	I practice the sounds of Italian.	☐	☐	☐	☐	☐

		Never or almost never true of me	Usually not true of me	Somewhat true of me	Usually true of me	Always or almost always true of me
13	I use the Italian words I know in different ways.	☐	☐	☐	☐	☐
14	I start conversations in Italian.	☐	☐	☐	☐	☐
15	I watch Italian language TV shows spoken in Italian or go to movies spoken in Italian.	☐	☐	☐	☐	☐
16	I read for pleasure in Italian	☐	☐	☐	☐	☐
17	I write notes, messages, letters, or reports in Italian.	☐	☐	☐	☐	☐
18	I first skim an Italian passage then go back and read carefully.	☐	☐	☐	☐	☐
19	I look for words in my own language that are similar to new words in Italian .	☐	☐	☐	☐	☐
20	I try to find patterns in Italian	☐	☐	☐	☐	☐
21	I find the meaning of an Italian word by dividing it into parts that I understand	☐	☐	☐	☐	☐
22	I try not to translate word for word	☐	☐	☐	☐	☐
23	I make summaries of information that I hear or read in Italian	☐	☐	☐	☐	☐
24	To understand unfamiliar Italian words, I make guesses.	☐	☐	☐	☐	☐
25	When I can't think of a word during a conversation in Italian, I use gestures	☐	☐	☐	☐	☐
26	I make up new words if I do not know the right ones in Italian.	☐	☐	☐	☐	☐
27	I read Italian without looking up every new word.	☐	☐	☐	☐	☐
28	I try to guess what the other person will say next in Italian.	☐	☐	☐	☐	☐
29	If I can't think of a Italian word, I use a word or phrase that means the same thing.	☐	☐	☐	☐	☐
30	I try to find as many ways as I can to use my Italian.	☐	☐	☐	☐	☐
31	I notice my Italian mistakes and use that information to help me do better.	☐	☐	☐	☐	☐

		Never or almost never true of me	Usually not true of me	Somewhat true of me	Usually true of me	Always or almost always true of me
32	I pay attention when someone is speaking Italian.	☐	☐	☐	☐	☐
33	I try to find out how to be a better learner of Italian.	☐	☐	☐	☐	☐
34	I plan my schedule so I will have enough time to study Italian.	☐	☐	☐	☐	☐
35	I look for people I can talk to in Italian.	☐	☐	☐	☐	☐
36	I look for opportunities to read as much as possible in Italian.	☐	☐	☐	☐	☐
37	I have clear goals for improving my Italian skills	☐	☐	☐	☐	☐
38	I think about my progress in learning Italian.	☐	☐	☐	☐	☐
39	I try to relax whenever I feel afraid of using Italian.	☐	☐	☐	☐	☐
40	I encourage myself to speak Italian even when I am afraid of making a mistake.	☐	☐	☐	☐	☐
41	I give myself a reward or treat when I do well in Italian.	☐	☐	☐	☐	☐
42	I notice if I am tense or nervous when I am studying or using Italian.	☐	☐	☐	☐	☐
43	I write down my feelings in a language learning diary	☐	☐	☐	☐	☐
44	I talk to someone else about how I feel when I am learning Italian.	☐	☐	☐	☐	☐
45	If I do not understand something in Italian I ask the other person to slow down or say it again.	☐	☐	☐	☐	☐
46	I ask Italian speakers to correct me when I talk.	☐	☐	☐	☐	☐
47	I practice Italian with other students	☐	☐	☐	☐	☐
48	I ask for help from Italian speakers	☐	☐	☐	☐	☐
49	I ask questions in Italian.	☐	☐	☐	☐	☐
50	I try to learn about the culture of Italian speakers	☐	☐	☐	☐	☐

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Appendix D

Permission to Use Instrumentation

https://pop.student.lynn.edu - Re: Permission for Motivation sub-scale usage - Microsoft Internet Exp

Norton™

Reply | Reply to all | Forward | Help

You forwarded this message on 10/12/2007 9:54 PM.

From: R.C. Gardner [redacted]
To: Kathia Flemens
Cc:
Subject: Re: Permission for Motivation sub-scale usage
Attachments:

Dear Kathia Flemens

Yes, you have my permission to use and adapt where necessary the Motivational Intensity, Desire to Learn the Language, and Attitudes Toward Learning the Language scales from the AMTB, with the conditions you describe in your letter. I recommend, however, that you compute Cronbach reliability of the individual scales in your data to determine whether the internal consistency reliability of the scales is maintained. If the reliability is compromised, this could have an influence on the validity of the scales.

You might also want to look at my webpage (see address in my signature file below). There are some articles there that might be of use to you. Moreover, there is another version of the AMTB that I have used in a number of international studies. These items are also available to you with the conditons you describe.

Good luck with your research. It sounds like an interesting investigation. I don't know whether you would have access to it, but we conducted a study contrasting self-instruction with traditional language learning, and used the AMTB. The article is:
Gardner, R. C., Ginsberg, R. E. & Smythe, P.C. (1976). Attitude and motivation in second-language learning: Course related changes. The Canadian Modern Language Review, 32, 243-266.

There were a number of analyses, but to me the most interesting findings involved the interaction between the control group (those in the regular classes) vs the self-instructed students and pre-test and post-test scores on three variables. On the three measures of attitudes toward learning French, Behavioural Intention to withdraw from the French program, and ratings of how inspired the French teacher was, the two groups were comparable on the pre-test, but on the post-test, there was a much greater decline in attitudes toward learning French, an increased intention to withdraw from the study, and a greater decline in ratings of teacher inspiration in the Control group than in the self-instreuction group. One limitation in the study was that students had the choice of opting for the type of class they registered in, so these effects cou.ld reflect other self-selection characteristics as well as the effects of the programs.

I hope this information is of use to you.

Sincerely, R.C. Gardner

https://pop.student.lynn.edu - Re: Permission for Motivation sub-scale usage - Microsoft Internet Explorer

Norton™ Fraud monitoring is on

Reply | Reply to all | Forward | Help

You forwarded this message on 10/12/2007 9:54 PM.

From: R.C. Gardner [redacted]
To: Kathia Flemens
Cc:
Subject: Re: Permission for Motivation sub-scale usage
Attachments:

Kathia Flemens wrote:

>
>
>
>
>
>
>
>
>
>
>To: Dr. Robert C Gardner
>
>Department of Psychology
>
>The University of Western Ontario
>
>London, Ontario
>
>N6A 5C2
>
>Phone: [redacted]
>
>Fax: [redacted]
>
>
>
>Re: Permission to Use Motivation sub-scale
>

Kathia Flemens

[redacted]

[redacted]

[redacted]

Attachments:

>Dear Dr. Gardner,
>
>
>
> My name is Kathia Flemens. I am a doctoral candidate in a PhD program at Lynn University in Boca Raton, Florida. My major is Global Leadership, with a specialization in Higher Education. My dissertation focuses on foreign language learners at the first year university level, and the topic, the effects of self-directed learning in the first year foreign language-learning classroom.
>
>
>
> This is a request for permission to use the Motivation Construct from Attitude Motivation Test Battery (AMTB), consisting of sub-scales Motivational Intensity (10), Desire to Learn the Language (10) and Attitudes toward Learning the Language (10). Upon completion, ProQuest Information and Learning, who may supply copies of the dissertation on demand and may make the dissertation accessible in electronic formats, will publish my dissertation.
>
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>
> The AMTB scale was present in the Index B of Towards a Full Model of Second Language Learning: An Empirical Investigation by Gardner, Tremblay & Masgoret, was printed with permission from the Modern Language Journal, published by National Federation of Modern Language Teachers Associations (Madison, WI, 1997, pp. 344-363). Copyright University of Wisconsin Press.
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>
> If permission is granted, I will include any in statement of authorization for use that you request on scales, or provide an APA note of permission. You will be given full credit. I would greatly appreciate your consent to my request. If you require any additional information, please do not hesitate to contact me. I can be reached at the above postal mail address, the e-mail address of [redacted], k phone number of [redacted] My PhD coordinator is Dr. Joan Scialli, who may be reached at the e-mail of [redacted] and phone number of [redacted].
>
>
>
>Sincerely,
>
>
>
>Kathia Flemens, PhDc
>
>kflemens@email.lynn.edu <[redacted]>
>

--
****
R. C. Gardner, Ph.D.
Professor Emeritus
Department of Psychology
University of Western Ontario
London, Ontario N6A 5C2
Office [redacted]
E-mail [redacted]
Webpage http://publish.uwo.ca/~gardner/

Done

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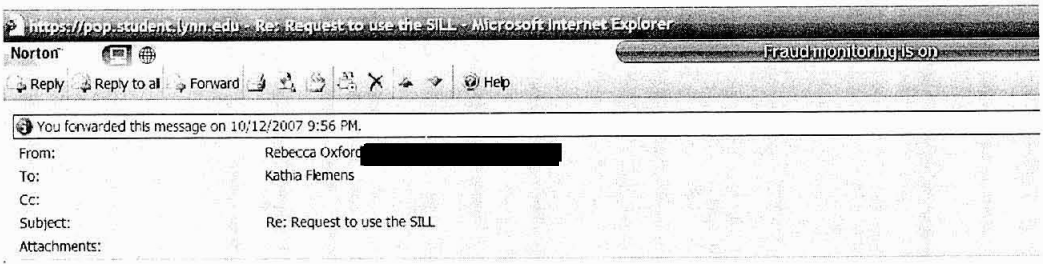

Dear Ms. Flemens,

You have my permission to use the SILL in your doctoral dissertation research. I wish you the best in your efforts.

Sincerely,

Rebecca Oxford

Rebecca L. Oxford
University of Maryland Distinguished Scholar-Teacher, 2006-2007
Program in Second Language Education and Culture
2311 Benjamin Building
College of Education
University of Maryland
College Park, MD 20742 USA

----- Original Message ----
From: Kathia Flemens [redacted]
Sent: Thursday, September 13, 2007 4:53:28 PM
Subject: Request to use the SILL

To: Dr. Rebecca Oxford

College of Education

2311 Benjamin Building

University of Maryland

College Park, Maryland 20742

Phone: [redacted]

Fax: [redacted]

Email [redacted]

[redacted]

Re: The SILL

Dear Dr. Oxford,

My name is Kathia Flemens. I am a doctoral candidate in a PhD program at Lynn University in Boca Raton, Florida. My major is in Global Leadership, with a specialization in Education. My dissertation focuses on the relationship between language learning strategies, motivation, and expected course grades among English speaking college students who are second language learners in a romance language classroom.

This is a request for permission to use the Strategy Inventory for Language Learning (SILL). Upon completion, ProQuest Information and Learning, who may supply copies of the dissertation on demand and may make the dissertation accessible in electronic formats, will publish my dissertation.

The SILL scale was present in the Language learning strategies: What every teacher should know, published by Boston: Heinle & Heinle, Thompson International (Oxford, 1990, pp 283-291)

If permission is granted, I will include any in statement of authorization for use that you request on scales, or provide an APA note of permission. You will be given full credit

I would greatly appreciate your consent to my request. If you require any additional information, please do not hesitate to contact me. I can be reached at the above postal mail address, the e-mail address [redacted] or phone number of [redacted]. My PhD coordinator is Dr. Joan Scialli, who may be reached at the e-mail [redacted] and phone number of [redacted]. Thank you for your time and consideration in this matter and I look forward to your reply.

Sincerely,

Kathia Flemens, PhDc

[redacted]

Appendix E

George Mason HSRB Approval

GEORGE MASON UNIVERSITY
Office of Research Subject Protections
Research I Building, 4400 University Drive, MS 4C6, Fairfax, Virginia 22030
Phone: 703-993-4121; Fax: 703-993-9590

TO: Maureen Goldstein, College of Arts and Science, Lynn University

FROM: Sandra M. Sanford, RN, MSN, CIP
Director, Office of Research Subject Protections

PROTOCOL NO.: 5609 Research Category: Doctoral Dissertation

TITLE: Motivation, Language Learning Strategies, and Course Performance Among English-Speaking College Students Learning a Romance Language

DATE: April 1, 2008

Cc: Kathia Flemens

On 3/31/2008, the George Mason University Human Subjects Review Board (GMU HSRB) reviewed and approved the above-cited protocol following expedited review procedures. Please **note that this approval is to conduct the research in classrooms where you have received instructor permission as of this date. In order to obtain approval to conduct the research in additional classrooms, please submit a request to the Office of Research Subject Protections along with a copy of the permission from the classroom instructor.**

Please note the following:

1. A copy of the final approved consent document is attached. You must use the content approved in the consent form with the HSRB stamp of approval for your research.
2. **Any modification to your research (including the protocol, consent, advertisements, instruments, etc.) must be submitted to the Office of Research Subject Protections for review and approval prior to implementation.**
3. Any adverse events or unanticipated problems involving risks to subjects including problems involving confidentiality of the data identifying the participants must be reported to Office of Research Subject Protections and reviewed by the HSRB.

The anniversary date of this study is 3/30/2009. **You may not collect data beyond that date without GMU HSRB approval.** A continuing review form must be completed and submitted to the Office of Research Subject Protections 30 days prior to the anniversary date or upon completion of the project. A copy of the continuing review form is attached. In addition, prior to that date, the Office of Research Subject Protections will send you a reminder regarding continuing review procedures.

If you have any questions, please do not hesitate to contact me at [redacted]

Appendix F

George Mason HSRB Consent Form

Motivation, Language Learning Strategies, and Course Performance Among English-Speaking College Students Learning a Romance Language

INFORMED CONSENT FORM

RESEARCH PROCEDURES

This research is being conducted to explore and explain the constructs of motivation, language learning strategies, and expected course performance among English-Speaking college students learning a romance language. If you agree to participate, you will be asked to complete a four-part survey. Part I will ask you to answer questions about your demographic characteristics. Part II will ask you to answer questions about your language learning experience and expected course grade. Part III will ask you to answer questions about your feelings and attitude towards learning the language you are studying. Part IV will ask you to answer questions about your study habits and how you learn the language you are studying. You should complete your survey independently, without comparing answers. The four-part survey should take about 15 minutes to complete. Completed surveys should be dropped into the slit box provided by the researcher.

RISKS

This study involves minimal risk. You may find that some of the questions are sensitive in nature. In addition, participation in this study requires a minimal amount of your time and effort.

BENEFITS

There are no benefits to you as a participant other than to further research in motivation, language learning strategies and course performance among English-Speaking college students, learning a romance language.

CONFIDENTIALITY

The data in this study will be confidential. Surveys will be confidential. You will not be identified and data will be reported as "group" responses. Participation in this survey is voluntary. The results of this study may be published in a dissertation, scientific journals, or presented at professional meetings. In addition, your individual privacy will be maintained in all publications or presentations resulting from this study.

All the data gathered during this study, which were previously described, will be kept strictly confidential by the researcher. Data will be stored in locked files and on a password protected computer and destroyed after five years following the completion of the research study. All information will be held in strict confidence and will not be disclosed unless required by law or regulation.

PARTICIPATION

Your participation is voluntary, and you may withdraw from the study at any time and for any reason. If you decide not to participate or if you withdraw from the study, there is no penalty or loss of benefits to which you are otherwise entitled. There are no costs to you or any other party.

ALTERNATIVES TO PARTICIPATION

If you choose not to participate in this study, you may leave the classroom.

CONTACT
This research is being conducted by Kathia Flemens, at the Department of Classical and Foreign Languages at George Mason University. She may be reached at [redacted] for questions or to report a research-related problem or the faculty advisor Dr. Maureen Goldstein, who may be reached [redacted] For any questions regarding your rights as a research subject, you may call Dr. Farideh Farazmand, Chair of the Lynn University Institutional Review Board for the Protection of Human Subjects, [redacted] You may also contact the George Mason University Office of Research Subject Protections at [redacted] if you have questions or comments regarding your rights as a participant in the research.

This research has been reviewed according to George Mason University procedures governing your participation in this research.

CONSENT
I have read this form and agree to participate in this study.

The George Mason University Human Subject Review Board has waived the requirement for a signature on this consent form. However, if you wish to sign consent, please contact Kathia Flemens at [redacted]

Appendix G

Lynn University IRB Approval

Lynn University

Principal Investigator: Kathia Flemens
Project Title: Motivation, Language Learning Strategies, and Course Performance Among English-Speaking College Students Learning a Romance Language

IRB Project Number: 2007-36 Request for Expedited Review of Application and Research Protocol for a New Project

IRB Action by the IRB Chair or Another Member or Members Designed by the Chair:

Expedited Review of Application and Research Protocol and Request for Expedited Review (FORM 3): Approved X Approved; w/provision(s) __

COMMENTS:

Consent Required: No _____ Yes __X__ Not Applicable _____ Written __X__ Signed____.

Consent forms must bear the research protocol expiration date of 3/30/2009___.

Application to Continue/Renew is due:

1) For an Expedited IRB Review, one month prior to the due date for renewal__X___.
2) Other:

Other Comments: George Mason University Informed Consent Form will be used.

Name of IRB Chair: Farideh Farazmand

Signature of IRB Chair [redacted] Date: 4/02/08

Cc. Dr. Maureen Goldstein

Institutional Review Board for the Protection of Human Subjects
Lynn University
3601 N. Military Trail Boca Raton, Florida 33431